# college

DECEMBER 1960

TODAY'S FURNITURE FABRICS LEAN TOWARD OPULENCE (p. 31)



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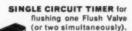
In public and semi-public toilet rooms, the Sloan Automatic Flushing System provides important benefits for both user and owner. It is the most ideal method of urinal operation ever devised.

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AMONG THE AUTHORS: W. P. Wetzel, director of physical plant at Temple University, Philadelphia, lists a score of seven points in favor of the use of an outside agency in protecting the campus: (1) lower payroll cost; (2) no secondary costs; (3) no absentee problem; (4) fewer administrative headaches; (5) no recruitment or training; (6) improved public relations; (7) better university security. Carl B. Opp, head of the off-campus section of the University of Florida, Gainesville, lavs down the fundamentals of a college or university sponsored off-campus housing program. It is true that institutional housing, even if available for all, is unacceptable to many students, be they married, foreign, graduate or nonconformist. Francis H. Horn, president of the University of Rhode Island, discusses the role of faculty, administration and trustees in curriculum control.

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# QUESTIONS AND ANSWERS

## Changes in Work

Question: What significant changes need to be made in present conditions of work for faculty and administrators?—O. B., Fla.

Answer: Obviously any specific and detailed answer to this question could be applicable to one institution only, as it would necessarily relate to conditions peculiar to it and not exactly duplicated at any other college or university. However, three broad principles may be taken as almost axiomatic for good institutional health and strength. If any are demonstrably lacking on a campus, serious study should be given to the problem, and means devised to correct it

The most important "working condition" for members of the faculty and administration is an atmosphere of dedication to the policies and objectives of the institution, and a mutual confidence that all are working toward the same goals.

The second factor might be the basic tenet of good organization, that responsibility and authority must always be commensurate and lodged in the same person. Faculty members should be free to teach, counsel and carry on scholarly research; administrators should administer. When administrators unreasonably restrict the academic pursuits of faculty members by arbitrary rulings and proliferation of red tape, the frustration and educational loss are immeasurable. When faculty members (who are free from ultimate responsibility for the results of decisions) attempt to administer, chaos reigns and the personal and financial assets of the institution are dissipated.

The third precept is that each member of the institutional community must be allowed and encouraged

If you have a question on business or departmental administration that you would like to have answered, send your query to COL-LEGE and UNIVERSITY BUSI-NESS, 919 North Michigan Ave-

nue, Chicago II, III.

to develop professionally. Time must be allowed for collateral reading, attendance at professional conferences of value, and at least occasional periods for planning, job evaluation, and intellectual stimulation and rejuvenation. If a faculty member or administrator is completely immersed in daily lecture preparation or in routine paper-shuffling, he soon becomes little more than a flesh-and-blood tape recorder or data processing machine. Discouragement and disillusionment inevitably result.

Perhaps the person who posed the question had in mind the more tangible "working conditions," such as salary and personnel benefits. If so, the answer is simple. Salaries and benefits have improved markedly in the past few years, and the inexorable law of supply and demand will ensure that the improvement continues. There is only one working condition for which I see no hope of improvement, especially for the administrator. With the impending growth of enrollments and staffs, the almost universally long working hours for administrators are likely to become even longer. The only solution is to prepare as well as possible by improving organizational efficiency and by learning to love your work! - BRUCE J. PARTRIDGE, business administrator, University of Delaware.

#### **Matching Asbestos Tile**

Question: Where would we be able match worn asbestos tile for a large area of the floor of one of our buildings? — D. H.,

Answer: The Asphalt and Vinyl Asbestos Tile Institute, 101 Park Avenue, New York City, has a color classification chart for both asphalt and vinvl asbestos tile, listing the comparable colors manufactured by seven leading producers. Thus, colleges with buildings that have sections of worn asphalt or vinvl asbestos tile floors that need replacing may closely match their present patterns and color with tiles supplied by a manufacturer other than the original supplier, if they so choose.

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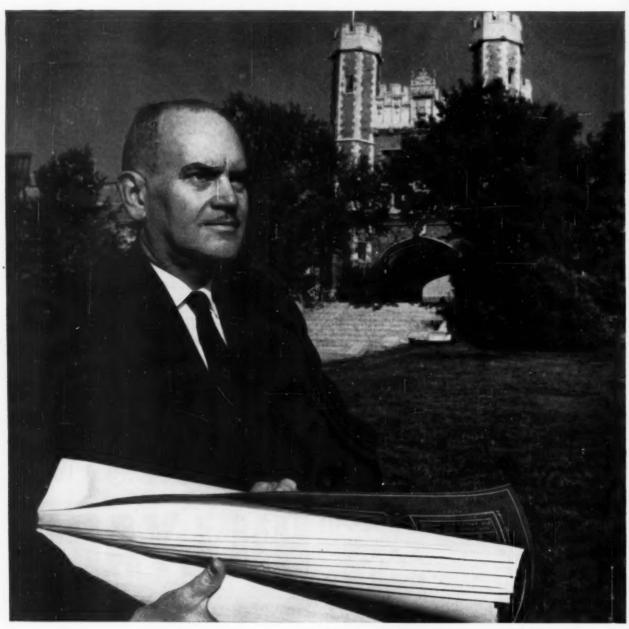
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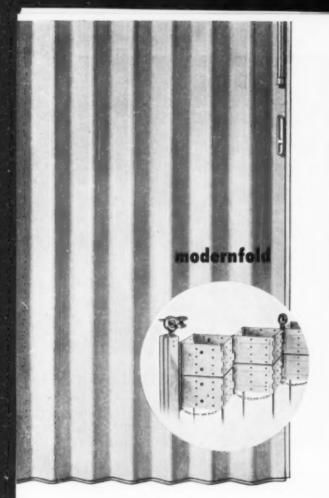
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# How Imaginative Engineering

# Provided Air Conditioning To Fit A School Budget

Must school air conditioning always be "too expensive"? Perkins & Will, Chicago architects and engineers, didn't think so last year when they designed suburban Homewood-Flossmoor High School. Without exceeding the school budget, they provided an air conditioned area large enough for complete summer sessions, including 15 classrooms, the library and all administrative offices. Actually, cooling for 25,000 square feet added less than  $3\frac{1}{2}\%$  to normal building cost — less than \$4 per square foot of cooled area.



Homewood-Flossmoor High School, Flossmoor, Illinois. Air conditioned section (center) connects to other school facilities by glass-enclosed passageways.

Architects and Engineers: PERKINS & WILL, CHICAGO

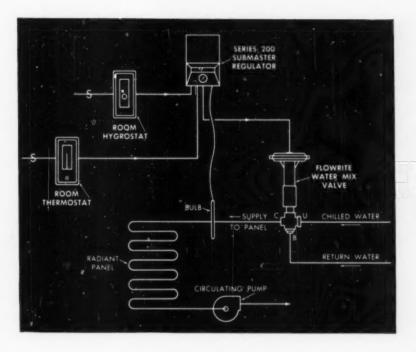
Mechanical Contractor: THE ECONOMY PLUMBING AND HEATING CO. OF CHICAGO.



Perkins & Will team of architects and engineers works out details of the cooling system design features and controls for the Homewood-Flossmoor school. From left to right are F. Philip Brotherton, Designer and Project Architect; Rudolph J. Houkal, Chief Mechanical Engineer, and Edward C. Colin, Chief Structural Engineer.

# How it was done

Perkins & Will grouped all rooms where both heating and cooling were desired into one section of the school. An interesting design feature is the core of 15 classrooms, surrounded on all sides by other rooms. The fuel savings realized from this "insulated" core help defray the added expense of cooling the entire summer school section. The engineers concentrated all mechanical service equipment beneath this section to eliminate long air conditioning channels. Double ducts and automatic controls were carefully designed for easy switchover to cooling and to take full advantage of tempered return air and outside air during spring and fall seasons.



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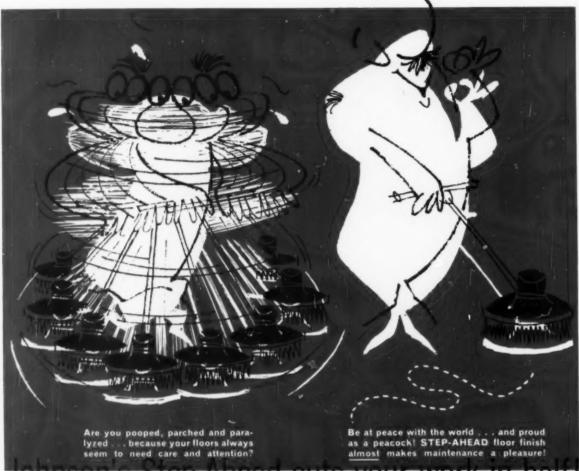
Homewood-Flossmoor Maintenance Superintendent William C. Drews (left), takes readings from the automatic Powers pneumatic control panel.



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# Is This Convention Necessary?

Carter Davidson
President of Union College and Chancellor of
Union University, Schenectady, N. Y.



A LL educators, I am sure, are oppressed by the number of educational meetings and conventions they are expected to attend and by the waste of time in travel to all parts of the country.

I propose that in planning for educational meetings we look through our calendar of business obligations and choose the month in the year that is least demanding of our physical presence on the campus and that is least attractive weatherwise for us to be at home.

The month of February might meet these qualifications. By that time the football season is over, the second semester or the second quarter of the year is under way, and we know fairly well what our financial outcome for the year is going to be. If we are a tax supported institution, our state legislature has had an opportunity to hear our arguments to the appropriations committees. February would probably be better than March, because in March we are faced with recruiting new staff for the coming year, preparing budgets, and sending out notices of reappointment. Also, if we live north of the Mason-Dixon Line, we are weary of snow and ice by February, and are ready for a sojourn in a warmer clime.

Therefore, my second suggestion is that the various organizations whose conventions we must attend choose a desirable spot like Hawaii, Southern California, Florida, Puerto Rico, or some other island of the Caribbean — and, perhaps at long intervals, New York City, if the theater season is at its height.

I would suggest that all of our groups coordinate their meetings, so that within a two-week or a three-week period all of the conventions could be held. We could make our hotel reservations for the entire period and could take along our wives, so that they would be able to enjoy a real winter vacation. Since most of us will not be members of all the organizations and active in all of the programs, some free days will be for our individual recreation. Therefore we will want to take our golf clubs, tennis rackets, and perhaps our automobiles so that we can enjoy all the facilities that lie about us. Such opportunities will increase informal

get-togethers in an atmosphere of relaxation. Some of the most important decisions in the world have been made while a twosome or foursome was waiting for the golfers ahead to move out to a safe distance from the tee.

The organizations would certainly have no difficulty in persuading the most important persons and the most inspiring speakers to appear on programs, for it would mean a delightful escape to winter vacationland for them as well.

We should also find that most of the important people whom we ourselves would like to meet and cultivate will be close at hand. The heads of the leading charitable foundations might well join with us and give us an opportunity to present our claims upon their benevolence. The places where we will be meeting will be those most commonly frequented by our alumni and trustees of means, and we can put in a good day or two of financial promotion. Even candidates for positions on our faculties might very well find it to their advantage to see us there rather than on our snowbound campuses.

Perhaps the greatest benefit resulting from such a program would be that the other 49 or 50 weeks of the year will be free for our professional and business men to attend to their main job. I do not wish to imply that this should be regarded as a vacation. Certainly we should still be entitled to our two or three weeks in the summer, if we can free our calendars to get away, but we can concentrate our efforts during the remainder of the year upon the real reasons for which we entered upon our particular way of life.

Who could possibly object to this happy scheme? The railroads no longer desire passenger travel, and the airlines are overcrowded, so no howls should come from them. The hotels will get a sustained patronage, which should be much more profitable to them than the in-and-out one-night stands that we now use, and those of us in the professions will then enjoy longer, happier, more useful lives to the ultimate benefit of each and every citizen.

# LOOKING FORWARD

# Faculty and Staff Compensation

I N A recent regional meeting of the Association for Higher Education in Los Angeles, B. Lamar Johnson, professor of higher education at the University of California, Berkeley, made some cogent remarks about faculty and staff compensation.

Dr. Johnson first approached the problem negatively. If financial remuneration is the primary or perhaps the sole consideration, he asserted, he had seven suggestions to make to individual professors and other staff members:

"Seek employment in a section of the country where college and university salaries are high.

"Seek employment in a specific institution that pays high salaries.

"Seek employment at an institution that provides sizable fringe benefits, such as retirement, hospitalization, medical care, insurance, housing — and, perhaps, parking privileges!

"Select a field of teaching, perhaps physics or mathematics, in which there is a shortage and therefore salaries are higher than in most fields.

"Cultivate marketable skills and achievements. In many cases this requires a realistic response to the adage: Edit, publish or perish. In some cases this seems to be the only method of achieving promotion.

"Strive to become adept at the art of bargaining. Teaching in the shortage fields and having an impressive foundation of published books and articles add greatly to one's bargaining power.

"Play politics, and play them shrewdly. Find out the source of promotional power in the college. Cultivate it; play up to it."

Dr. Johnson's observations, cast in a cynical vein, point up the fact that professional personnel is concerned with factors other than monetary return. Working conditions and a congenial environment become extremely important.

Along this line, the Association for Higher Education has provided the stimulus for a study in Minnesota of career motivation and compensation of college members. Preliminary findings in this project revealed that the seven items rated highest in importance by staff members are these:

"I feel free to think, speak and write in my field.

"I feel free to exercise my rights as a private citizen.

"I feel close, friendly ties with my professional colleagues in my department.

"I have job security.

"The facilities of the institution are available for me for personal study and research.

"My family and I enjoy respect in the local community.

"I feel close, friendly ties with my associates throughout the university."

These observations and conclusions suggest that many things other than the pay check become important to a person who has chosen higher education as a career. This should not be seized upon as a reason for exploiting the staff or faculty by a low salary schedule, but rather as an opportunity to improve the climate in which the staff member operates.

# Gift Wrapped

THE holiday season brings with it many gay and festive occasions, even in a serious institutional environment. It is a time when people mellow a bit and "all's right with the world."

For some institutional administrators it also brings a critical test of ethical performance. This problem is particularly acute for those who are charged with major responsibility for institutional purchasing.

Many of the business and industrial firms that do a substantial amount of business with a college or university, or hope to in the future, have followed a holiday season practice of sending gifts to the office or home of key officials. If an institution lacks a specific policy in regard to the handling of this situation, it can cause compromising embarrassment to both college and recipient. The matter of excessive entertaining during the holidays also can become a problem of real proportions.

It is difficult to apply a hard and fast rule in regard to holiday gifts from business firms, but the best practice is to discourage any gifts whatsoever. One should assume that the original purchases were made in good faith and that the commodities or services provided were negotiated with full consideration of a proper market price. If so, neither party owes the other any special inducement, such as a gift that might be interpreted as a special reason to buy one vendor's goods or services in preference to another's.

Season's greetings - but exercise your conscience!



A private outside entrance to their room is much sought after by students living in private residences. A private bath also is desirable.

# Colleges Look to OUTER SPACE

Carl B. Opp Head, Off-Campus Section University of Florida, Gainesville Ten fundamentals in dealing with private owners of off-campus housing

M ANY colleges that have long dreamed of housing all their students on campus are looking now toward outer space for relief from the pressures and problems of increasing enrollments.

Those who are unaware of the problems that exist in outer space soon find, however, that that alien creature, the private landlord, adds a new dimension to housing administration. Policies and procedures applicable to the familiar institution-student relationship are not readily applicable to the new institution-land-lord-student relationship created in outer space. The economics are different, and the diversity of offerings, in itself desirable, creates complexities in management and personnel relationships.

Unfortunately, in approaching the problems and possibilities posed by outer space, institutions generally tend to be either too restrictive and regulatory in attitude or too limited in the range of their conception and effort. If an institution has ignored off-campus housing or has merely acknowledged its inevitable existence for many years, then arbitrary application of regulations, restrictions, standards of safety, sanitation, management and quality (laudable though they may be) can create more prob-

lems than are solved and can delay potential improvements. On the other hand, when the approach is limited in point of view and is restricted to minimum services, existing problems are little reduced, potential improvements are discouraged, and the student, whose welfare is the source of the whole effort, is not helped much.

Consequently, we recommend that any institution that comtemplates inaugurating an off-campus housing program or that is dissatisfied with the results of its present program consider certain fundamentals implicit in the relationship between the institution and owners of rental property.

The fundamental importance of carefully considering and effectively expressing the philosophy underlying any program cannot be overstressed. All too often the so-called service programs are based on action toward an end, without adequate consideration of the means. The effectiveness of a satisfactory off-campus housing program depends heavily on the philosophy behind it. This is primarily because the program brings the institution into daily contact with private citizens in a context in which academic considerations and ideals must be converted into practical applications. The following points are offered as expressions of a practical philosophy in this particular opera-

1. In general, the physical presence of a permanent institution determines the general nature of use of the surrounding, privately owned land. In other words, the land surrounding most campuses is improved in accordance with the existing or anticipated business needs created by the campus itself.

It is highly improbable that land contiguous to a modern campus will continue to be Residence A property, unless the local zoning ordinances provide for this and are strictly enforced or unless the institution has land to spare for the creation of parks and buffer zones between itself and the outer world. Consequently, the improvements made on the land tend to be those that will provide the goods and services students and staff members need or want, and these services are largely feeding and housing. Merchandising services generally constitute a mere sprinkling among the immediate off-campus property improvements.

It seems logical, then, that the institution — if for no other reason than its own self-interest — should participate affirmatively in guiding the orderly and economically intelligent development of the land surrounding it, unless it is willing to accept in the long future of its probable growth the existence of high priced slums and low priced taverns.

2. Off-campus housing is complementary, not supplementary, to institution owned housing. The institution's total housing program includes off-campus housing as an integral part

of its operation and the established interests of such housing should receive full and fair consideration in all institutional planning.

3. Good housing with good management for good students is good business. This stresses the quality and management aspects of the housing complex while it recognizes the private enterprise profit motive. The institution can candidly admit it expects the landlords to make a reasonable profit on their investments but can also insist on good quality and proper management. At the same time, the institution implies its cooperation and interest through the phrase "good students."

4. The off-campus housing program must be a continuing operation. This is extremely important in promoting sound investments, a feeling of stability, and effective cooperation from established and prospective landlords. Unless there is a continuing program that is an integral part of the institution's operating policy, two negative results may follow, either simultaneously or consecutively: (a) Investments will be made by persons willing to take long chances for quick profits, and this will result in marginal, ill planned housing and continuous hassling over zoning changes; (b) malpractices of various types will creep in, creating continuing problems for the institution and its students

5. Basic standards of conduct must apply uniformly to all students — on

# **Favored Accommodations**

- Apartments bring non-institutional, modern Florida living to single as well as married students.
- Cottages offer private but efficient and economical housing.
- One-bedroom, furnished apartments of the garage type.
- Modern trailer parking spaces and individual cottages with outdoor recreation facilities.
- Room accommodations with private bath and refrigerators for limited snack privileges.
- Here a field representative for off-campus housing discusses with a home owner the problems and responsibilities in student rentals.



1











and off campus, and the institution must take an active interest in seeing that these standards are observed. If the college does not set forth reasonable, understandable and practical standards of conduct and procedure for its students and does not cooperate with landlords in seeing that these standards are observed, the landlords will be left to their own protective and defensive devices, which can create a jungle of conflicting practices. At the same time the institution will lose the confidence of those on whom it must depend for a fundamental commodity - housing.

The adage about "one bad apple" applies with appalling directness to student housing situations. The college or university must accept and meet its responsibilities for guiding and controlling, in general, the conduct of its students, regardless of where they live. In addition, the institution should lend individual landlords assistance in formulating detailed, individual policies that are practical for particular premises and that are still consonant with the institution's general student standards.

 Students should be allowed maximum freedom of choice in making their rental arrangements in private housing. The institution should guide, assist, advise and counsel; but it should not dictate.

Policies specifying that students may live only in housing approved by the institution or that single students may not live in apartments or cottages create unnecessary administrative problems, divert attention from more important aspects of housing supervision, and can have a negative effect on efforts to increase the supply of acceptable housing. Single students whose attitudes, intentions or apparent lack of maturity cast doubt on their ability to meet the responsibilities inherent in possession of this family type of housing should be discouraged from obtaining such facilities, but other students who can profit from living in such housing should not be barred from it.

In short, administrative planning should distinguish carefully between areas appropriate to the educating and counseling processes and those appropriate to regulatory measures. And in all areas it should exhibit some trust in the ability of its students to learn from precept, advise-



"A home away from home" becomes a reality in many off-campus accommodations. Students often prefer to fill out or even completely furnish their own apartments with extras from home or inexpensive furniture.

ment and experience, to exercise judgment, and to grow in maturity and responsibility.

7. The institution should list and refer (or recommend) only facilities it has inspected and found acceptable. If circumstances necessitate referral to housing that has not been inspected, the situation should be made clear to the student.

The qualification of acceptability implies the existence of some set of standards by which housing offerings are judged, but the operation of an off-campus housing program need not be delayed or impaired by lack of written, comprehensive standards. The cart may go before the horse in this instance, if the personnel responsible for the program has experience in housing and possesses the ability to make practical judgments.

However, written standards for safety, sanitation, quality and management eventually will have to be set up at some point in the program. Such standards need to be comprehensive but flexible, technically sound but comprehensible, firm but fair, and practical but progressive. It is easier to call for standards than it is to provide them, and undue haste in this area can box in the whole program.

The safety and sanitation standards

applied to housing by the governmental agency having jurisdiction over the area should be carefully investigated and checked both as to their comprehensiveness and application or enforcement. If they are found adequate, the institution should base its own standards on them, adding only the features usually necessary to make general residential housing satisfactory for students. If there are overlapping jurisdictional agencies with different sets of standards, the institution must incorporate the appropriate features of each agency's standards into its own, without creating conflicts.

If there are no standards or if the jurisdictional agency's standards are antiquated or inadequate, then the institution must draw on the resources of higher agencies and other institutions and should, at the same time, begin efforts to have the local agency's. standards brought up to date. The essence of the matter here is that the institution should enlist the aid and cooperation of governmental units that will have the legal authority to enforce appropriate housing regulations, since the institution itself cannot practically be a regulatory and enforcement agency except in controlling its own students.



Single, foreign students with special dietary needs often find institutional housing difficult. Shown here are Carl B. Opp and his secretary discussing private housing arrangements with a graduate student from the Far East.

8. Adequate personnel, adequately prepared and adequately paid, must be provided for the program if it is to be a true program and not a mere classified advertising or listing service. If housing offerings are inspected and if proper referral service is rendered to student clients, then the simplest program will require at least two persons to operate it. In addition, the personnel must have, or acquire at the institution's expense, at least minimum knowledge of the fundamentals of housing standards, real estate economics, and property management, plus general knowledge of the institution's educational philosophy and standards and administrative procedures. The staff members responsible for operating an off-campus housing program are continually before the public; consequently, they should be capable of promoting good public relations.

The necessity for practical and professional knowledge of real estate economics and rental property management technics can hardly be overstressed. It cannot be assumed that because a given individual owns rental property he knows how to manage it properly, particularly in relation to housing students. In addition, the guidance of prospective investors is

frequently necessary. An increased amount of private rental housing can be merely an increase in problems if the additional housing turns out to be a poor investment for its owner.

9. An effective program will require much more personal interviewing and individual attention to individual problems than almost any other service program. Assignments to residence halls are usually made en masse, and adjustment problems, if any, are worked out by hall counselors later. But the landlord as a real person (compared with the landlord as an impersonal institution) in the off-campus housing operation adds a fourth dimension. Also, the diversity of private housing offerings poses problems for the prospective tenant.

Finally, the fact that the student is usually completely inexperienced in rental procedures and often is equally ignorant of the town adds to his need for individual handling. Classified lists and other technics of presenting information on available housing can reduce this individual contact work to some extent, yet the basic nature of the operation requires more individual interviewing than does institutional housing.

The basic premises and problems of real estate economics in a free

enterprise system must be recognized by the institution and the differences inherent between nonprofit institutional housing and profit seeking private housing must be accepted and resolved. In general, rental property management procedures should not vary too greatly between institutional and non-institutional housing, since probably 75 per cent of institution owned housing is now self-liquidating and requires careful attention to income flow and maintenance of reserves.

However, property taxes alone increase the rates in private housing, while problems of vacancy loss, mortgage money rates, size of the operation, and similar variations create other economic problems, and these in turn create a different (and sometimes repellent) attitude on the part of private owners dealing with students. If good relations are to be maintained, these differences and the reasons for them must be made clear to the students.

## **Depends on Circumstances**

The extent to which each of the foregoing 10 fundamentals is applicable depends, of course, on each institution's particular circumstances: its geographical location, the size of the community in which it is located, its own size, the composition of the student body, the institution's age, the extent and nature of real estate developments in the areas surrounding the campus, and the institution's educational and student personnel philosophies.

Emphasis has been laid on student housing, but assistance in housing new faculty and staff members can be an important function of an offcampus housing program.

Many institutions of considerable size and stature operate quite effectively with a minimum amount of institution owned housing, permitting private enterprise to provide extensive capital investments in housing and using the abilities of informed and cooperative landlords to supplement and support effective student personnel programs. For any institution, however, planned and professional attention to outer space should bring worth-while returns in better service for its students and better relationships with the community in which it exists.

# THE CURRICULUM:

# Don't Leave It to the Faculty...

THERE is no question that the faculty controls the content of individual courses. Academic freedom, even when abused, protects the individual faculty member in his own classroom. I would not change this. However, I would remind faculties that academic freedom involves freedom to learn as well as freedom to teach. The student has certain rights that all too often are neglected by the professor. A little more control of this aspect of the curriculum by the faculty itself, departmentally, would be in the best interests of higher education.

On the other hand, the administration and the board must work ever more closely, in association with the faculty, constantly to improve the quality and the effectiveness of the curriculum.

To imply, as some do, that boards collectively and trustees individually cannot deal competently with curricular matters, and aren't interested in doing so, is, in my opinion, false. Our present board at the University

of Rhode Island, in fact, is actually more concerned with the real business of a university than are many faculty members. The board is constantly stressing the need to strengthen the faculty, to maintain scholarly activity, to raise academic standards, and to strive for excellence in all that we do.

Some professors betray equal misunderstanding of the "administration" when they lump the trustees as "persons opposing a faculty point of view." One critic states that there is a "fundamental difference in values" between administrators and faculty members. "Indeed," he goes on, "the two different groups belong to two different cultures."

This, I submit, is nonsense. Presidents and deans don't change their basic interests and characteristics when they change from professors to administrators. In spite of an occasional general or politician, lawyer or industrialist who becomes a college or university president, the vast majority of presidents come from the

ranks of the faculty, often without benefit of prior administrative experience. Once professors don the administrator's robe, they do not shed their interest in the curriculum.

Yet this is the charge a professorcritic has recently made. Administrators are presented as "absorbed in the values of industrial management," trying to control the curriculum by "inappropriate and crude devices," proliferating the number of courses to please external pressure groups with a resulting "disintegration of the curriculum," and, above all, being inimical to true scholarship. This caricature of college presidents is so exaggerated it scarcely needs comment.

Even were it true, however, I would still find it hard to accept this prescription for placing the control of the curriculum in the corporate body of the faculty. There emerges from such criticism an image of the faculty as an ideal community of scholars, dedicated to pure learning and its advancement, and possessed of infinite wisdom when dealing with the curriculum. The picture is no more true than that of President Philip Lindsley, who in the early Nineteenth Century spent 25 years of his life opposing the stand-pat conservatism of the faculty at the University of Nashville; he termed the faculty "a parcel of paltry pedants, pedagogues, bigots, charlatans without feeling, spirit, kindness, honesty or common sense."

Every faculty has men who are good and bad, brilliant and undistinguished, self-seeking and devoted. But this is not the major reason why

Not buildings, not financial support, not research projects — are of first concern in making the changes that must come. Of crucial importance will remain the educational program — the curriculum that is designed to attain the institution's and society's objectives.

From a paper presented at the 15th National Conference on Higher Education, sponsored by the Association for Higher Education, Chicago, 1960.

... while the president devotes his energies to winning friends for the institution and raising money to keep it going.
The president — and the board — must work ever more closely, in association with the faculty, constantly to improve the quality and effectiveness of the curriculum.
The key to success will be the president.

the control of the curriculum cannot be left wholly to their corporate decision. The reason is the very one that some professors use to justify faculty control: The faculty has resisted broadening the curriculum. They are correct about the resistance - except when a particular discipline finally forces its way into the curriculum. Then proliferation of courses is largely a faculty matter, as Beardsley Ruml correctly pointed out: "The decisive pressure for increase in the number of courses comes from within the faculty itself, as a response to interdepartmental and intradepartmental competitive forces that are understandable and real."

Historically, the faculty has always resisted the expansion of the curriculum, occasionally in cooperation with the president, as in the case of the famous Yale Report of 1828, but more often in opposition to the president. Some believe the resistance has been good; I believe that, in sum, it has been bad. The history of higher education reveals a continuing struggle to admit new fields of study into the curriculum against unrelenting faculty opposition.

The curriculum has expanded primarily because of the efforts of strong presidents, men with vision and dedication to the interests of higher education and American society: men like Eliphalet Nott, who during his 62 years as president made Union College, at one time, the most progressive institution in the country; Andrew Dixon White, a student of his who became the first president of Cornell, and, of course, Eliot of Harvard.

But the road to a broader curriculum is marked by such tragic casualties of faculty and community conservatism as Horace Holley at Transylvania, Francis Wayland at Brown, and Henry Tappan at Michigan among the most brilliant and able of a long list of distinguished American college presidents.

The conservatism of faculties is not merely a matter of history. I have moved as president into two institutions where change was imperative. The trustees had told me so and it was obvious to any objective observer; in one case, an outstanding consultant had stressed it in a long report. Yet what did I run into? All too often the point of view of faculty members was: "We've always done it this way. It was good enough in the past, so why change?"

The conservatism of the faculty then is why curriculum control cannot be left to the faculty. Control must be shared.

The faculty, one professor charges, must "organize" to obtain control. This is a strange contradiction for this same professor deplores "administrative controls and direct.on." "Its organization must be prescribed in by-laws, it must have an effective committee system, methods of election, a definite membership, and an accepted parliamentary procedure," he savs.

How typical of faculty thinking! How much faculty time is wasted in the machinery of so-called "faculty government," instead of its being devoted to the teaching and scholarship that is the faculty's primary function.

As faculties get larger, as new departments and schools are added, it becomes increasingly difficult to leave final control of the curriculum to the faculty. In a small liberal arts college with at least some commonness of purpose, control can more safely be left to the professors. In a large and more complex institution, certain controls over faculty decisions are imperative. The extent of the controls and the nature of the respective responsibility of faculty, administration and trustees will depend to a considerable extent upon the nature of the institution - its charter, its announced objectives, its corporate control, and the basis of its financial support.

Even a privately supported university, let alone a tax supported institution, has certain obligations to the public, which are not adequately recognized by many professors, who stress the independence of the university from the "multitude of in-

sistent demands" of society. But the independence of the university and independence from the welfare of society are not synonymous. Colleges are not monastic-like communities in which faculty members can pursue their interests without relationship to the world outside, as Prof. Adolf A. Berle stated so cogently recently.

The term "curriculum" actually has three different meanings, and the respective roles in control differ, depending upon which meaning of curriculum is intended. The term is used for (1) the total academic program of the institution - all the courses in all its schools and colleges; (2) the specific course content of a program for a specified degree - the undergraduate engineering curriculum, for example, and (3) the content of a particular course - the subject matter and its treatment by the professor.

# Domain of Faculty

The curriculum in the sense that it is a more or less prescribed course of studies for a particular degree is also the domain of the faculty. In this sense I agree with the position that the faculty member must participate in the construction of the curriculum. But the faculty is not absolute. Both the board and the administration, which are responsible for the financial management of the institution, have an interest in this aspect of the curriculum, and consequently must exercise some measure of control. The number of courses and the size of classes have a direct bearing on operating costs. The faculty is seldom interested in such mundane matters except when they are reflected in the size of the pay check.

Mr. Ruml was deeply concerned with getting better salaries for faculty members. Adverse faculty reaction to his proposals is undeserved. All Mr. Ruml was saving was that more balance in class size is necessary, and since the faculty can't be depended upon to bring it about, someone else

must.

However, examine the Ruml proposal for a possible combination of courses for a college of 3000. At an average student-faculty ratio of 20 to 1. wholly reasonable in my opinion, he suggests 50 large lectures averaging 180 students, 100 lecture-discussions averaging 90 students, and 900 seminar-tutorials averaging 10 stu-

dents each. With 85 per cent of all the courses averaging only 10 students, there are plenty of opportunities for a course of his own for each of the institution's 150 faculty members. In fact, each can have two small courses. In addition, he suggested an average teaching load of only 9 hours (9 1/3 in the 3000 student college). It is time that faculty members, and administrators too, read Mr. Ruml's "Memo to a Trustee" and harken to its good

What has so disturbed members of the academic profession about the Ruml proposal is the suggestion that "the trustees . . . must take back from the faculty as a body its present authority over the design and administration of the curriculum." Mr. Ruml maintains that as a body the board can exercise this authority better than the faculty as a body. Since the board legally has final authority and accountability, it must do so. And I cannot see how one can quarrel with this conclusion when "curriculum" is used in its third sense - the total academic program of the institution.

The ultimate responsibility as to whether the institution will establish a department, say of journalism, or even offer courses in journalism within the English department; provide a new major in anthropology or art: go into graduate work, or establish a new school must finally rest with the board. Since it and not the faculty must be responsible for finding the funds for the institution, the Ruml position is sound.

But Mr. Ruml does not suggest that the board initiate such curriculum matters, although certainly as the body responsive to public need, as some faculty critics put it, the trustees certainly could propose changes in the total curriculum. But he suggests that the board not operate independently. He merely proposes to take back the control of the curriculum, especially in this broadest sense, from the faculty as a whole, and carry out its responsibility through some "mechanism."

Mr. Ruml suggested three possibilities: "the office of the president itself, reoriented, supported and held responsible for adequate curriculum performance. Or a rededicated, revitalized and strengthened committee of the faculty on the curriculum. Or perhaps a new council for educational

policy and program, including members of the faculty, the administration, and the trustees."

This is no suggestion that the trustees run the institution or determine the curriculum. It is, rather, a plea for joint responsibility in curriculum control. Definitely, however, it is in opposition to the argument for a strongly organized faculty controlling the curriculum through political maneuvering, parliamentary procedure, and what a certain critic calls democratic processes. They are not really democratic because the English department, for example, can always outvote the philosophy department; and given the typical departmental loyalties, at least when departmental interests are involved, decisions will seldom be reached on their merits.

The key to success, it seems to me, is leadership. And this can best be provided by the president. Presidential leadership of both the board and the faculty is essential to the effectiveness of the institution as a whole.

#### Role Is Not One of Control

The role of the administrator in the curriculum is not one of control. The day of the authoritarian or dictatorial president is over. But even in a large institution, his leadership can still be decisive. It is the president who most clearly can appraise an institution's strengths and weaknesses, who can see curriculum areas that require development and can balance genuine needs against departmental empire building; who can defend the institution against unwise external pressures.

If he is the kind of president colleges and universities should have and admittedly do not always get he has the vision to see beyond today's problems to tomorrow's opportunities, the courage to fight for the over-all interest of the institution rather than specific interests of segments of it, and the patience - which, at the end of his career, Eliot declared was the most important quality needed by a college president - to work toward long-range goals persistently but sympathetically, on the one hand, with the queer breed of independent spirits who become professors, and, on the other, with the trustees, who, in most cases, are accustomed to conduct their affairs under different rules of the game. .

# Today's Furniture Fabrics Lean Toward Opulence

A review of the latest color and texture trends in upholstery and slipcover materials

Rose Padgett

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M ODERN artistry in furniture fabrics is expressed in a combination of subtle texture and clarity of color, encompassing design and pattern. The trend today leans toward the opulent look, namely, beautiful, distinctive colorful fabrics, newly textured in a variety of ways and yet appropriate for their selected needs. Gone are the days when the faithful four — brown, blue, black and white — dominated the scene.

In order to utilize color to its best selling advantages, it is wise to have a clear comprehension of how color is applied to fabrics to produce flat or solid colors, or multicolored pattern and design. Dyes, in brief, are colored compounds capable of being fixed on fibers and fabrics or colorsealed in the spinning solution.

Textiles may be dyed during various stages of manufacture, such as:

1. Stock Dyeing. Color is applied to loose fiber stock before carding (tweed, homespun, covert, heathers, shetland and cheviot).

2. Top, Yarn or Skein Dyeing. Stripes, checks and color can be selectively loomed into the design. 3. Piece Dyeing. One of the least expensive forms of coloring fabrics, this highly satisfactory method (provided the dye is a good vat dye or other reliable type of dye) may be used to create an even, solid color. When the fabric consists of "mixed fiber types" intriguing color patterns are possible, such as the new heather effect, stripes, checks or the embroidered look. This piece-dye, crossidye coloring of fabrics is much in use today because of ease of operation, cost, economy in time, and the efficient effective results.

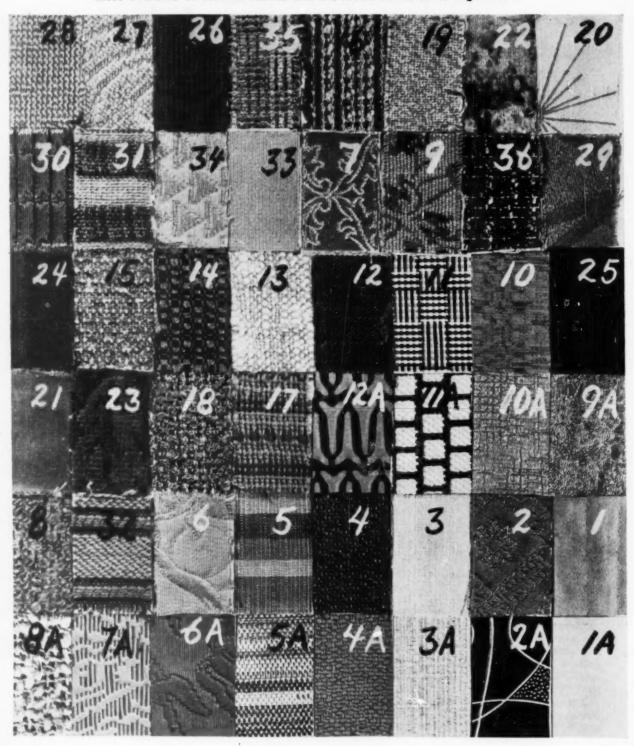
4. Direct Printing. This is the commonest method of applying surface color and design to material. The cost becomes higher as the number of colors increase. A high fashion trend in the new fabrics incorporates a printed design over a textured or pile fabric. This treatment gives the fabric a two or three dimensional look. Other types of printing include the discharge, resist, blotch, duplex (register printing incorporating a printed design on both sides of the fabric), screen (stencil), and block printing.

5. Built-In Color. This method, also known as dope-dyed, solution-dyed or spun-dyed, has revolutionized the field of color in textiles. The color is incorporated in the chemical solution from which the acetate, triacetate, rayon or other synthetic fibers are made prior to their being forced through the spinnerette.

Most of the new dynamic vinyls and vinvl coated fabrics have had the built-in color treatment prior to the surface coating of the cotton, rayon or nylon woven or knit backing. Since the fiber or film is colored throughout it will be highly colorfast. "Colorfast," as applied to fabrics, infers that they will retain their color during the life of the material, but no fabric is absolutely colorfast. In buying fabries it is important to check the label to make sure that the fabric colors are guaranteed colorfast under the particular conditions of use. What is not on the label is as important as what is on the label.

The term "vat-dyed" has become a hallmark of color satisfaction. It refers to fibers, yarns and fabrics that have been dyed by a process that

These swatches of modern fabrics also are shown on the Cover Page in color



#### FIRST ROW

- 28. Gros point. Mohair pile and cotton backing. Avocado green. 27. Sculptured nylon frieze. Mustard colored. High fashion and durable.
- 26. Mohair mothproofed frieze. Rust colored.
- 35. Blue-green yarns and metallic yarns with gold metallic highlight.
- 16. Tweed fabric. Novelty yarns in red, tan and brown.
  19. Yellow, tan and heather tone cotton fabric.
- 22. Red silk velvet with colored and metallic print surface design.
- 20. Natural white slub yarn linen. Plain weave and surface. A roller print.

### SECOND ROW

- 30. New three-dimensional fabric. Black filament nylon with black polyethylene warp and
- white viscose filling. 31. Mohair, linen and polyethylene warp yarns. Blue, brown and black viscose filling yarns. Double cloth stripe. Tri-lock fabric.
- 34. Bright coral and silver with pyramid loomed design.
  33. Dull gold, woven diamond patterned fabric, with gold metallic highlight.
- 7. Dusty rose damask tapestry-loomed fabric. Cotton and rayon.

  9. Beige woven tapestry with blue, pink and dark brown loomed design
- 36. Cotton, rayon and acetate novelty fabric, with metallic yarns to add interest. New silicone finish repels oil, soil and water.
- 29. Pink and gray damask loomed fabric with metallic yarn.

#### THIRD ROW

- 24. Mohair warp pile plush in tan with a red filling yarn to give an iridescence.
  15. Tweed fabric. Orange, white, black and gold novelty.
  14. Turquoise and black tweed cotton fabric textured by yarn, size variation, and color.
- 13. Heavy off-white pure linen crash. Note slub yarn texture.
- Navy and white yarn dyed fabric with twill weave. Denim.
   Black and white basket weave design with gold thin-line metallic highlight.
   Jacquard loomed, lime green, textured fabric.
- 25. Red cotton velveteen cut pile fabric.

# FOURTH ROW

- 21. Mist green velvet cut pile febric.
- 23. Sapphire blue cotton and rayon deep pile, patterned velours.

- 18. Chromespun acetate and dyed cotton novelty fabric.
  17. Synthetic yarn, spun fabric textured by yarn size variations, color and weave.
  12A. Breathable fabric. Larkspur blue twill with geometrical design in vinyl.
  11A. Breathable fabric. Silver and charcoal twill loomed cloth, with vinyl printed highlight.
- 10A. Breethable fabric. Gold Siam vinyl with embossed textured design.
- 9A. Green jewel-toned tapestry, textured with embossed vinyl coated fabric.

#### FIFTH ROW

- 8. Coral pink 100 per cent frieze, textured nylon face with cotton and viscose backing. 32. Fine cotton warp, with turquoise, blue and tan heavy wool and rayon textured loomed
- 6. Nylon matellase loomed febric.
  5. Woven cotton striped fabric. Yellow, brown, red, pink and blue stripes.
- 4. Woven pebble-like design produced by yarn variations, fiber type, and color.
- 3. Beige cotton woven bark-cloth.
- 2. Green brocatelle, imitating Italian tooled leather.
- 1. True leather with its luxury and smoothness. Yellow (and other colors).

#### SIXTH ROW

- BA. Charcoal with "Monet" softness. Woven fabric-like texture achieved by means of printed and embossed surface.
- 7A. Simulated damask tapestry in turquoise blue embossed vinyl.
- 6A. Mist green Pasadena Rose matelasse texture, achieved by means of a printed and embossed surface.
- 5A. Mocha textured stripe; a printed and embossed surface.
  4A. Tangerine colored vinyl pebbled dosign, embossed surface.
  3A. Beige colored vinyl "bark" texture achieved by means of embossed and printed surface.
- 2A. Vinyl brocatelle, an imitation of Italian tooled leather.
- IA. Yellow vinyl knit backed fabric, simulating the appearance of real leather.

employs oxidation. Vat dyes are considered the most resistant dyes to washing, to dry-cleaning, and to sunlight. These dyes may be printed on fabrics. With such innovations as a wider range of "fast" colors, better types of synthetic dyes, and newer methods of applying color to fabrics created from natural, man-made fibers, fiber blends, and combinations, satisfaction in regard to color and colorfastness is being met in the furniture fabric field.

A great diversity of pastel, somber and light colors is now available along with the glamor of colored metallic varns and jewel-tone leather, vinvl and fabric finishes. Gold, silver and black still dominate the "glitter" type of fabric. Some of the newest fabrics have hairline complimentary colored metallic varn receding in the fabricated textured material. The opulent look is created by color combinations of Bristol blue with white tones; brown with turquoise tones; electric green with turquoise tones, and shocking pink, mauve-purple and tangerine.

The new ease-of-care vinyl coated fabrics with their rainbow hues have entered the upholstery field in competition with prestige fabrics of natural leather and woven materials. The present colors are more varied and subdued. They include jeweltone and pearlike glitter colors, as well as some vivid, neutral and somber hues. The newest colors include clover and Siamese pink, canyon and cardinal red, champagne, beige, toast, cocoa, spice brown, gold, antique white, dove and charcoal grav, ebony, larkspur, turquoise, and Bermuda blue, burnt sugar, tangerine, chartreuse, and olive and hunt green.

Tastes in furniture fabrics tend to fall into three major categories, which directly or indirectly govern the selection of color and texture in materials. Other factors include the environment, controlled or uncontrolled usage, and the climatic conditions to be contended with.

The executive group includes fabrics for contract furniture and interi-

ors. The wide range of bright to somber neutral colors includes, predominantly, light and dark beige to brown, yellow, mustard, watermelon, cocoa and chocolate. One "must" appears to be the use of at least a touch of tangerine or orange with or without the glitter or metallic yarn. The blues include turquoise, peacock, dark blue, and electric blue-green. The greens include pastel, hunter and light and dark olive. Other colors are American beauty pink, rosy reds to coral, carnation pink, cerise and light or dark red. A touch of white, black or charcoal seems pertinent. When these colors are combined they affect one another in powerful ways. In general, the bright colors predominate, giving a striking effect.

## **Broad Stripe Impressive**

The broad stripe contrast effect is particularly impressive. Quiet colors, when carefully combined with bright ones, can be made to enhance and compliment each other, and vice versa. The trend is toward this type of color composition.

Similar furniture fabrics and materials (leather and/or vinyl coated material) in carefully selected color combinations are used in various areas of a building. Each room can have a definite character of its own, and this is established by varying the color schemes and decorative themes. The new orange-yellow gives an exciting atmosphere; beige, gold and browns produce a restful atmosphere, and the vivid blue-greens create a "jumpy" look. Cathedral red gives a warm and stimulating atmosphere. Coolness is achieved by a combination of pale blues, acid greens, and lavender tints. The masculine atmosphere is achieved by the use of subdued shades of terra cotta, green, antique brown, and brick red. For selected areas, blues with an accent of red and orange are to be commended.

The contemporary group includes fabrics for modern residential interiors. The newest colors in this group range from subdued beiges and bronzes to navy, lavender-blue, iris, electric blues, rich ruby, rose, coral and shocking reds. The colors of the Hawaiian Islands are in vogue: tangerine, apricot, pecan, olive, emerald green, turquoise, plum, charcoal and brown. Any of these colors may be

used for a monochromatic effect or in a combination of two or more colors with or without a jewel-tone or metallic thin-line effect.

The transitional group includes the traditional fabrics, with their return to frank luxurious formality in traditional styles - fabrics woven on an off-white background in tones of blue, blue-mauve, or shades of green and burnt orange, leaf green and blue, brown and coffee, yellows and orange, or blues with an accent of red and orange on a linen-look colored background. Prints, stripes and plaids in bright and mellow hues are attractive on all types of fiber-fabric construction. Monochromatic novelty yarns are woven with metallic thinline effect. Combinations of colored novelty yarns create enchanting effects of heather, tweed or stripe. Florals in small geometric patterns or floral and scroll patterned prints on a pale or natural ground in mellow colors of pink, blue, yellow-gold, orange, green, mauve-violet and cocoa are in evidence. Colors in this group also range from subdued beiges and bronzes to electric blue and ruby or cardinal red. Brightly colored mosaiclike patterns are newcomers to this

For more formal settings, there is a leaning toward oatmeal and off-white colors in the linen, linen-blends, and the spun rayon linen-like fabrics.

## **Texture Trends**

The textured fabric look is much in vogue. Texture is achieved in a variety of ways to give the flat or the three-dimensional look. Fabric surfaces range all the way from the smooth doeskin leather and satin look to the nubbly look of bulk yarns in novelty tweeds, which are created in no small measure by fiber and color variation within and on the material surface.

Furniture materials definitely fall into four patterns: (1) the prestige leather look in natural leathers obtainable in a wide range of delicate through vivid colors including a bronze, gold and silver jewel-like finish (genuine leather is available in textures ranging from high gloss through satin, hand-crumpled to suede finish); (2) the loomed fabrics, with emphasis on woven design in the Jacquard weave, the arresting diamond pattern, the basic twill, satin and

plain weaves, or in a combination of these weaves including the cut and loop pile fabrics; (3) the luxury newcomer, wool suede, a 100 per cent nonwoven wool fabric with a soft to the hand and rich luster (this fabric has a mothproof and a silicone finish to repel moths, oil, moisture and airborne dirt and is marketed in more than 30 exclusive colors); (4) the dynamic vinyl coated knit backed fabrics in embossed and printed designs simulating the textures and appearance of the prestige of leather and woven fabrications.

Color and texture in furniture fabrics tend to follow that of the 36 fabrics illustrated on the cover page and, in black and white, on the preceding left-hand page.

Fabrics Nos. 2 to 12 and their counterparts 2A to 12A illustrate the closeness of simulated color, texture and surface design in vinyl coated fabrics currently made by various manufacturers. Fabric No. 1 (fifth row) is a sample of natural leather; its vinyl copy counterpart is No. 1A. in the bottom row. The vinyl fabrics Nos. 10A, 11A and 12A (fourth row) fall into the latest breathable vinyl upholstery materials. The gold textured fabric is characterized by minute punctured holes (invisible to the human eye unless viewed against the light) to provide the desired breathable qualities. Fabrics No. 11A and 12A (fourth row) show the return toward twill loomed materials; their laminated vinyl textured surface design gives a modern three-dimensional look as well as serviceability.

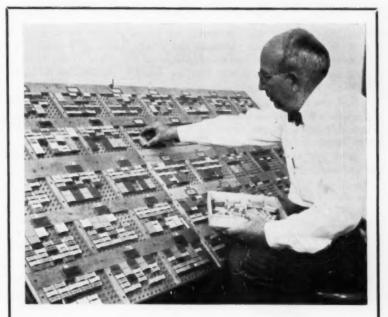
The homespun linen texture, salt and pepper, or heather look incorporating the very heavy slub yarn is evident in Fabrics 13, 19 and 20 (third and top rows). Fiber combinations and novelty yarns give highfashion tweeds and novelty fabric textures such as Fabrics 14, 15, 16 and 18 (third, top, and fourth rows). The nvlon faced coral pink frieze (No. 8, fifth row, far left) shows the use of new textured yarns in elegant furniture fabric. The cut pile and frieze loomed fabrics still rank high in the furnishing field as evidenced by other pile fabrics, Nos. 21 and 28 (fourth and top rows, far left). Combinations of colored satin or pearl finished natural leather with quality mohair/wool gros point give a new look to this traditional serviceable fabric. Fabrics No. 29 to 36 (second and fifth rows), with their luxurious weaves, have a modern touch.

Two fabrics, Nos. 30 and 31 (second row, left), show a new trend in a double cloth - the tri-dimensional texture look, created by fiber and yarn variation. Conventional varns may be woven with a special contractile or "high-shrink" yarn. A final heat treatment given to the fabric causes a controlled and predetermined shrinkage to take place, giving the fabric an attractive puff, or cushion, deep-dimensional texture. Note the similarity in texture and striped appearance of Fabrics 31 and 32. The latter (fifth row) is loomed with a fine cotton warp and a rich variety of colored woolen varns to achieve this bold three-dimensional vertical stripe effect.

The arresting diamond patterned Fabric No. 33 (second row, center) has a touch of metallic highlight at each point of the design. Metallic yarns add interest to the cotton/ray-on/acetate novelty fabric shown in No. 36 (second row). This fabric leads the way with a new silicone finish that repels water, stains, oil and air-borne soil.

Subtly toned Jacquard loomed damasks, stripes and a wide range of iridescent plain textures that coordinate with the pattern colorings may be included in this group. Bold prints in small geometric design, stripes, florals and pictorial views on plain or textured backgrounds have entered both the slipcover and the body-cloth areas of furniture materials. Accent on surface texture created by woven design, novelty yarns, and fiber combinations with or without a printed design or special finish is much in vogue.

Loomed fabrics and smooth finished natural leathers have set the current style for the competitive vinyl coated knit backed fabrics. Combinations of leather and loomed prestige fiber and man-made fiber combinations have created a new look in furnishings. The use of vinyl coated textured fabrics in conjunction with loomed fiber fabrications has created a new look in furniture fabrics, and at a moderate price. The opulent textured look is in high demand regardless of the area of furniture settings, and it appears that it will continue to be sought after.



### This Professor Plays With Blocks

I VAN HEBEL, head of the mathematics department at the Colorado School of Mines, plays with blocks a month every year, and gets paid for doing it.

Professor Hebel methodically plans the 45 different curriculums the school offers, on a precisely engineered wooden schedule board. The board is partitioned into 45 different class schedules. Mr. Hebel arranges blocks for every Mines class and places them on metal pegs attached to the board.

The job is not so simple as it first appears. The professor must arrange and rearrange 2500 wooden blocks in 45 variable patterns covering 446 different course offerings for 1100 students!

The massive schedule panel was constructed by the school's wood shop in 1940, and it comes equipped with nearly 3000 blocks in 17 colors. They vary from the one-hour class type, 1 by ½ inch, to the three-hour laboratory block, 1 by 3 inches. So far as Mr. Hebel knows, there isn't another system like it in the country.

Mr. Hebel, who, in addition to arranging schedules and heading the mathematics department, is in charge of analog computation methods and numerical analysis, had quite a problem with his blocks last year. The school changed its curriculum to consolidate courses, intensify basic science offerings, and add more humanities classes. That meant he and his secretary had to relabel each block and start from scratch. It took him three full weeks to arrange the first semester offerings only.

The job of scheduling classes at the Colorado School of Mines is a difficult one because of the heavy load per student. The average student has 29 hours in class and another 30 hours in study. A senior in the first semester of the mining engineering option can get the easiest schedule — 18 hours — if he is lucky! Professor Hebel's board greatly aids the task of scheduling.

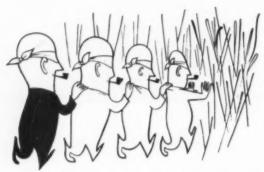
Of great interest to Professor Hebel is the summer enrollment. More than half of the school's 1100 students took summer session courses last year, and each student spends at least two summers at Mines. Professor Hebel has to arrange blocks for those courses also. — J. Sankovitz, Colorado School of Mines, Golden.

# Ten Ways To Petrify Progress

EXECUTIVES OF AMERICA, AWAKE! All around you the status quo is in deadly peril. In laboratories, factories and offices, wild-eyed innovators are busy turning out a steady stream of dangerous new ideas. Under cover of cutting costs and building profits, they are stealthily undermining the established order, The Way Things Have Always Been Done.

True, you can't stop progress—but in your own organization you can slow it down to a barely perceptible crawl. The strategy is clear: Stop new ideas before they start. Applied ruthlessly, the tactics outlined here will enable you to stamp out the insidious contagion of creativity.

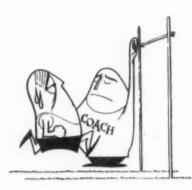
Swing into action, executives, before your most cherished assumptions and time-honored routines go the way of the pterodactyl and the dinosaur!



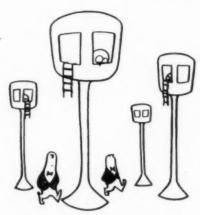
Follow accepted practices. Has the proposed approach ever been tried before in your industry? If not, it can't be much good. Better stick to the tried-and-true: Follow the lead of your industrial confreres (even if they're heading straight for oblivion).



Point out the microscopic flaws. So the new patent package for persimmons could earn an additional \$5 million for the company? Maybe so—but be sure to point out that the patent will expire in 17 years. Then, too, the persimmon trees may become diseased, or the persimmon producers may demand a larger share of the profits. If you can conjure up enough difficulties, the project may well be postponed.



Set standards impossibly high. A plan to cut office costs 3 per cent? Too piffling even for discussion. The only plan you will entertain is one that will cut all costs at least 30 per cent, hike prices, and ensure increasing dividends for the next 25 years.



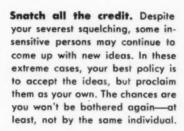
Hire an expert to do your thinking. Nobody can really be trusted with a problem except a man who has made a lifetime study of the subject and knows exactly what not to do. And what could your other employes offer—aside from common sense, insight, and experience in your business? Another advantage of having one man do all your thinking is that you can easily fire him if he starts getting too original.

Shoot first — ask questions later. Catch new ideas when they're in the vulnerable embryonic stage. A swift, snappy objection will bring the idea to a standstill. You can then pick it up, examine it closely, and remove the vital spark.





Make all the decisions—nobody else knows how. You may, however,, put your subordinates through the motions of a democratic discussion. After a few practice sessions they will get the point, and you may then rely on them not to voice a single unwanted or unexpected idea.





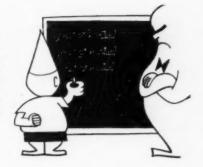


Keep your job to yourself. Don't discuss your job; don't tolerate questions; above all, don't divulge your problems. It's true that others might be able to help you, but can you trust their motives? No, far better to struggle on in isolation. Your tower may not be pure ivory, but at least it's your own.

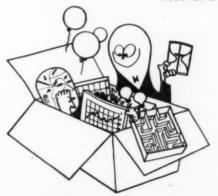


Keep subordinates in their places. A job for everybody, and everybody hard at his job. Keep them in tight compartments and their ideas—if any—will die for lack of air.

Permit no criticism. It's baldfaced treachery to question so much as a single routine established by the Founders—who have long since gone to their reward. (If they were still around, they'd be making changes—but that, of course, is a different matter.)



These tactics should suffice to bar unwelcome ideas from your door. It may happen—Heaven forbid—that after having completely stifled all urges to originality among your staff, you are confronted with a pressing need for a new idea. In that case . . .



Buy a creativity kit. A brainstorming package—what could be more thoroughly inspirational? Set up the charts, distribute the balloons, read out the script, start the egg-timer, and stand back! In three frenzied minutes, the inspired participants should pop up with 209 gleaming new ideas, one of which will be the answer to your problem! (If not, you must have the wrong problem.)

- Text by Lydia Strong
- Drawings by Al Hormel

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# Internal Auditing: Why's and Wherefore's

First comes internal control, including the continuous check of employe upon employe or department upon department. The system of internal control that a college or university establishes will be as simple or as complex as the size of the business operation requires.

Internal auditing then becomes necessary in order to check on the behavior of the staff and the functioning of the system.

G. E. Gere

Assistant Controller, Carnegie Institute of Technology, Pittsburgh

IF PEOPLE were perfectly behaved, traffic policemen would not be needed. Yet we all know that policemen are essential to make certain that drivers and pedestrians obey the traffic regulations.

Like the state police car on the road ahead, the mere presence on the business staff of an internal auditor calls attention to the fact that steps have been taken to protect the property of the college or university.

#### Internal Audit Is Preventive

The internal audit, first of all, is preventive. Too, by means of such an audit, cases of fraud, error or mismanagement can be discovered before they have had a chance to become extensive. It also is true, from a positive point of view, that the internal auditor will produce reliable accounting information and will strengthen the security of the institution's assets.

Though there is little doubt that most of the personnel in the business organizations of our colleges are honest and of good character, an internal control and audit system should help these people to be as nearly free from temptation as possible.

The handling of cash or securities or having access to articles of value does provide a chance to act in a dishonest manner, but if the individual worker knows that management is on guard by check or audit, a part of this temptation is removed. Of course audit cannot detect all frauds in their beginnings, or even disclose an isolated case, but management must constantly be on the alert. Often the differences between an honest and a dishonest person are the pressures of a personal situation and ease of access to needed funds, together with the thought that they will not be missed or can be returned.

It has been said that education is a continuing process. Perhaps an examination of what has occurred in some of our colleges through fraud and falsification may add to this process. The cases on the opposite page are presented in the hope that they may prove to be of interest and help in the formation of an audit or internal check program.

The examples of fraud given are fictitious, but they illustrate what may happen under the given conditions.

The purposes of the audit are: (1) testing for accuracy, (2) the mainte-

nance of proper controls, (3) appraisal of the results of the work, (4) checking on the qualifications of the personnel involved.

#### **Condensed Outline Included**

A condensed outline of an audit program is included here in order to present a basis for beginning such an undertaking. It is not intended to be all-inclusive, but it should present some idea of the work that may be undertaken by a college business auditor.

Cash and fund verification. Actual count and reconcilement with bank and control accounts based on cash or supporting data. Surprise and unannounced checks are used for imprest cash and separate bank accounts. Use control by prenumbered receipt forms and by cash registers and their totals.

**Investments.** Check of securities and their care and custody by inspection. Verify purchase and sales authorization.

Receivables, current notes, and student loan fund notes. Determine that billings are being made according to regulations. Verify by circularization or other direct contact with the

(Text Continued on Page 41)

From a paper presented at a work-study clinic in connection with a meeting of the Eastern Association of College and University Business Officers.

#### Some Case Studies of Fraud, Fictitious But Typical

Case 1. Controller Pincher, deciding that he would take some of the school funds, asked the bookkeeper to write large checks for such purposes as payment to construction contractors and others. He did not support these requests by invoice or otherwise, except by a memorandum. When a check was given to him, he signed it, wrote the name of the school on the back for endorsement, and asked the college's bank to cash it He explained that he was havedling the transaction on a cash basis directly with the contractor. All that Controller Pincher needed to do was to pocket the money after cashing the check.

Solution: A second person auditing the payment, including the verification of the proper supporting invoice, could prevent the fraud. Checks in payment of debts should be sent by mail or given directly to the payee. Such a deliberate act would be discovered promptly by audit of the proper supporting data and correct endorsement upon the check.

Case 2. Foreman Bully continued to put through time cards for employes in his department who had been discharged. He also received the pay checks after they had been prepared by the payroll department. By forging the names of the employes on the pay checks and keeping the funds after cashing the checks, he was able to complete his stealing.

Solution: Verification of time cards as to employes and periods of employment should be made by the plant office. Distribution of pay checks should be made by an independent party, such as an internal auditor, direct to the employe in person at his job.

Case 3. Bookstore Clerk Doer was assigned the responsibility of reimbursement to student veterans for purchases of articles not carried in the bookstore. The student veteran, by the presentation of a regularly approved order form showing his purchase from a source outside of the college bookstore, obtained repayment from Clerk Doer. The clerk then placed in process for billing to the Veter-Administration the correct copy of the order form. However, when the charges to the bookstore account for these purchases were processed, additional items were listed and this increase in the total on the order form was taken from the bookstore cash by Clerk Doer.

Solution: All copies of the order form for both the charge to the Veterans Administration and the charge to bookstore purchases must be processed together. Internal check requires authorization for reimbursement made by one party with payment to be made by a second. Audit of bookstore purchases against charges to the Veterans Administration would disclose any differences.

Case 4. The nonresident fee of the university was greater than the resident fee by \$100. Teller Eraser by changing many fee slips from nonresident to resident was able to retain the difference for his own use. Later, he would make changes in the filed fee slips to increase them back to the correct nonresident fee by the \$100 amount.

Solution: The teller collecting the fees should be balanced by a second party, particularly at the registration period. He should not have access to the fee slips and the fee slip file. Internal audit through registrar's office information should produce the total

due from fees and make a check to determine that this amount has been collected.

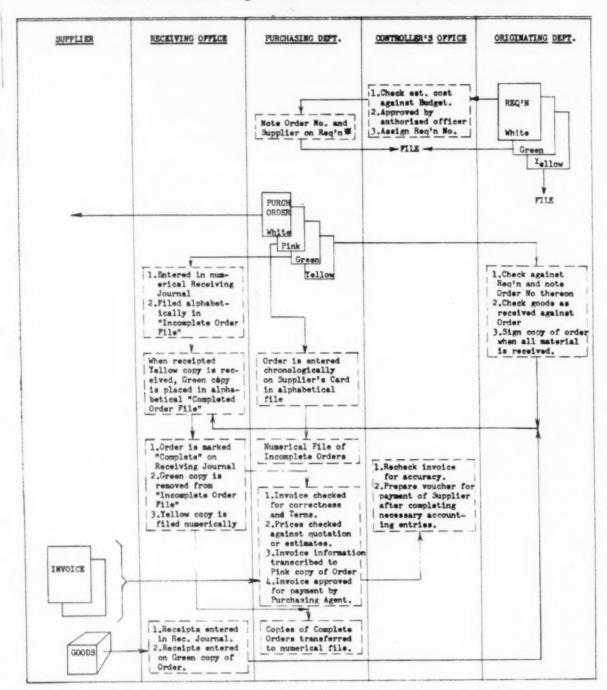
Case 5. Clerk Slick was permitted to make purchases by cash. To obtain reimbursement, he would obtain and submit a receipt for each purchase and after receiving the required funds from the school cashier would return to the outside firm and state that a receipted invoice was required. This invoice was used to collect from the school for the same transaction the second time. Cash reimbursement receipts were also raised; for example, a \$2 purchase of stamps was increased to \$102.

Solution: Purchases by cash should be kept to a minimum amount and be limited in number. Their form and control should be carefully prepared. All support for cash purchases should be canceled at the time of reimbursement. An audit of cash reimbursements should determine that duplicate purchases had been made. Verification of budget controls and an analysis of disbursements should raise further questions leading to the disclosure of such overcharges.

There are other cases where the cash payments on student accounts and notes are pocketed for a few days. The cashier then makes application of subsequent remittances to restore the original amount. Of course, there will be a day of reckoning, particularly if there is internal check or the separate control of receivables by a second party, such as the account bookkeeper. When the bookkeeper and the debtor have contact, any shortage or difference should be discovered.

Audit by circularization will help to determine the correct balance due from the debtor.

#### Flow Chart Indicating Outline of Procurement Procedure



₱ 1. Knowledge of prevailing prices and best sources of supply are used when determining supplier for

most expendable items.

2. Government Sources, such as Federal Supply Schedules, are frequently consulted.

3. For items of capital equipment, written bids are required where the estimated cost is \$1,000 or greater. When the item is estimated to cost less than \$1,000, prices from two or more suppliers are obtained except in cases where a specific product of a particular manufacturer is specified.

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debtor. Also test for payments on and disposal of over-age items. Inquire into procedure for making loans and follow-up of amounts due.

Inventories of storerooms, cafeterias and bookstore. Test physical inventory as to quantities, price extensions, and footings. Check with inventory control account. Examine methods of stores control and organization.

Restricted current funds and deposit accounts. Funds should be handled according to restrictions established by the donor or depositor. Test receipts and documentary evidence.

**Endowment funds.** Review fund restrictions as provided by deed of gift. Audit detail investment of funds.

Plant funds. Verify cash or funds available with bank and accounts. Check authorization for expenditures. Review procedure and inventory increases for additions to plant as to correctness and check details by reference to deeds or construction contracts. Test the inventory of physical plant. Perhaps study the fire and other insurance coverage.

#### Income

**Student fees.** Make verification from the registrar or academic office record to the income received.

**Endowment income.** Check the income due as based on the inventory of investments and other financial information and security returns.

**Gifts and grants.** Study the internal controls, as there should be *no* weaknesses preventing these funds from reaching their intended goa!.

Sales and services of educational departments. Billing and collection of such items should be handled by or delegated by the college business office, and with periodic tests or otherwise this procedure should be maintained. All mail remittances or gifts are to be received at one location for the entire school.

#### **Expenditures**

The college should have in effect an over-all budget control of all expenditures. Administration is to be by the department head or dean for the budget, contract or restricted fund account as maintained by the accounting department, with expenditure for articles or payroll to be initiated in the department office. A review of financial procedures of the various departments is an audit function.

Disbursements. The audit should produce: (1) requisition or request for purchase, (2) quotation or bid, (3) purchase order, (4) receiving report, (5) invoice, (6) check in payment. The relationship of these steps of procedure, proper authorization, and budget provision are to be established.

Payrolls. Review the separate or imprest bank account as set up for payroll only, as all payments are made by check from this account based on:

#### DIVISION OF FINANCE AND BUSINESS MANAGEMENT PRESIDENT Controller and Director, Auxiliary Enterprises Power Plant Division of Finance and Committee and Concessions Committee Business Management ASSISTANT CONTROLLER -ASSISTANT CONTROLLER-PURCHASING NON -ACADEMIC **OPERATIONS** PERSONNEL OFFICER FINANCE Operation and Maintenance Purchasing Employment Eudgets of Plant Book Store Accounting Training Cashier General Equipment Post Office Classification of Auditing Dining Halls Receiving and Employees Mimeograph Service Dormitories Stock Room Alterations and Improve-Telephone Exchange Details: Uniform Pay Schedules ments of Buildings Operating and Budget Engineering Services Uniform Regulations Details: Statements Purchase Orders Manuals Notary Group Life Insurance Casualty and Other Details: Bills and Invoices Parties and Awards Janitors Personal Purchases Employee Publication Transportation such as books, etc Insurance for Faculty and Grounds Income Tax Service Special Construction Students City and Federal Taxes Projects Fire Insurance Parking Night Watchmen Retirements Blue Cross Hospitalization U. S. Savings Bonds Operational Pay Rolls Inventory of Equipment Vouchering Pay Rolls for Research Contracts Endowment Income Veterans' Accounts **Organization Chart** Registration **Showing Functional Responsibility** uperintendent of Power Plant Student Loan and Accounts Power Plant Operation Receivable Collection Parking Tags Power Plant Distribution for Internal Control Student and Faculty System Check Cashing White Printing, Addressograph Research Contract Accounts Student Activity Accounts

(1) budget authorization, (2) appointment, contract and time card, (3) authorization by superior or supervisor, (4) check in payment and payee's endorsement. A study may be made of original data before, at the time, or after the payroll is prepared, and checks may be separately distributed by the internal auditor to each individual. Also verifications of deductions, such as hospitalization, taxes, insurance and retirement, and their proper payment, are to be made, as well as a check of sick and vacation allowance pay.

Library or other separate departments. Use the same procedure as that for accounts payable. However, internal control may rest with checks made by individuals upon individuals within the separate unit rather than with checks made by different units upon each other.

Auxiliary and other enterprises. Bookstores, hospitals, summer camps, alumni association, cafeterias, athletic activities, and others would be examined by the internal auditor, as segregated activities, with the same care as educational activities or even more. An intensive audit similar to that of any commercial enterprise may be made. Of course, the proper internal control procedures must be in effect. The "gross profit test" and check by occupancy and capacity for income are to be used. Inventory, accounts payable, payroll and other tests are necessary for expense verification. Each enterprise may have a single separate and complete audit.

#### **General Notes on Audit Program**

The auditor should always keep in mind any weaknesses or changes to be made in systems or procedures, and sufficient objective test checks should be made of selected details investigating them from inception to final culmination. Any checking or verification should be supplemented by additional study of the correct business operation of the particular activity subjected to audit, in order that: (1) Time may be saved and the procedures simplified, (2) protection and help may be provided for the honest and efficient staff member in the arrangement of his work.

Complete, comprehensive working papers drawn up in a concise manner are to be prepared. The audit report

should give its scope, be brief, describe the condition of the work, and contain no more details than are necessary. Criticisms and means of improvement should be presented together. Minor errors and less important conditions requiring correction may be discussed with supervisors at the point of occurrence without taking formal action. Such items may be omitted from the report.

The results of an internal audit should be reported and acted upon promptly. Actions as to follow-up of more serious conditions should be listed as report recommendations and should be carried out by the internal auditor upon instructions from the chief business officer of the college.

The audit program for the large university, summarized on a functional basis by S. C. Smith, auditor, University of Illinois, suggests: "(1) Verification of financial and operating data. (2) Analysis of records. (3) Protection of school assets. (4) Prevention and detection of fraud and error. (5) Appraisals of all operations as to costs and effectiveness. (6) A clearinghouse for new ideas and an effective coordinator of over-all procedures. (7) Assistance to public accounting firm. (8) Training departmental personnel and acting as a personnel training center. (9) Reporting to management deviations from established rules and regulations. (10) Direct service to management on special projects."

#### **Working With Public Accountant**

The internal auditor and the public accountant, who does the annual audit, may be of aid to one another, since in the broader sense they have the same goal. The internal auditor working from day to day seeks correct and accurate financial data and sees to it that system and controls are proper to produce these results. The public accountant's interest is to see that the statements of financial condition and results of operations are fairly stated in accordance with generally accepted accounting principles, applied on a consistent basis. By careful planning it may be possible for the internal auditor to do much of the work required by annual audit, and fit this work into the internal audit program.

Some of these steps are: (1) Preparation of confirmation requests to

banks, fiscal agents, or customers. (2) Analysis of deferred or accrued balance sheet accounts. (3) Independent confirmation of notes and accounts receivable. (4) Aid with detail checking or balancing to control accounts. (5) Preparation of many of the working paper schedules.

The result of complete cooperation between the external and internal auditors may mean a better job for less cost. A sound and effective system of internal control, supplemented by an internal auditing program, reviewed by the outside accountant, often permits substantial reductions in the public accountant's scope of investigation.

#### For a Small College

The business manager of the small or medium sized college, and there are many of these in our section of the country, makes use of all the means of good business operation available, such as personnel, public relations, investment and, of course, purchasing and accounting technics. Internal audit also may be of use and have application in the small school, although it may not be formalized as in a large organization. The protective and constructive appraisal of this function should have some recognition, for there is much to be gained by having someone who can do this type of work.

All of the technics mentioned here cannot be applied, since this work is specialized in character. But if it is not feasible to appoint an individual to perform this function, perhaps an accountant taking time from accounting statements and other work may make some imprest cash verifications, audit some of the important auxiliary activities, or carry on some of the other tasks of the internal audit department. He, together with the business manager, should review the entire accounting operation and the internal control of the college. A surprise audit by the college's certified public accountant with an appearance at a time other than at the close of the fiscal year may also prove to be of value.

If the internal auditing program of either a large or a small school is to be a success, it must have the backing of the chief business officer. His interest will determine any development or expansion.

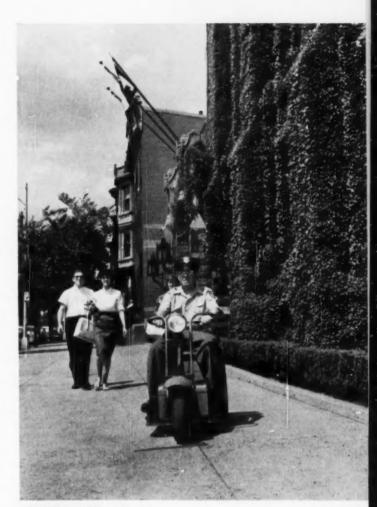
# CAMPUS SECURITY by CONTRACT

An urban university saves money and administrative time through dealing with an experienced agency

W. P. Wetzel Director of Physical Plant Temple University, Philadelphia

A CHIEVING good security in an urban university presents a bewildering array of problems, many of them alien to the usual campus. At Temple University, in Philadelphia, we believe we have found the answer through out-contracting our security work to an agency that provides us with the practical combination of trained and supervised personnel, professional know-how, and imaginative service. And we are saving money in the bargain!

Temple University embarked on this program after years of disappointing experiences with various types and kinds of employes hired and supervised by the university. As a result of our first trial period in one location at our dental-pharmacy school, we believed we could get better service outside at about the same cost to the university. We were agreeably surprised by the fact that our latest comparison indicates an annual saving of at least \$10,000 over similar coverage with university security serv-



SCOOTER DUTY. A guard pilots an electric scooter to facilitate coverage of the sprawling campus area.



ESCORT. Walking the switchboard operator back home after night switchboard duty in Peabody Hall, girls' dormitory.

ices. And in addition, a considerable amount of staff time spent on security problems now is available for more productive activity.

After nearly 10 years of out-contracting our security, we find that we have materially reduced vandalism, provided greater protection for students and faculty, reduced fire and safety hazards in buildings and laboratories, found a solution to our parking problem, introduced smoother handling of social and other special events, virtually eliminated robbery and intrusion, and produced sounder public relations with students, faculty, our neighbors, and the general public.

Temple University's academic center consists of 14 major buildings. Two of them, 10 and 12 stories high, are set among more than 50 venerable row houses, 'three-story affairs converted to university use and awaiting eventual demolition under the university's expansion program. A rough evaluation of the physical plant and its contents would exceed \$11 million.

Into this complex of old and new structures, criss-crossed by half a dozen major Philadelphia streets, pour more than 17,000 students in an academic year — graduate and undergraduate students, about half of them attending evening class sessions.

To this picture of extreme concentration of classrooms, residence halls, laboratories, libraries and administrative offices add the fact that Temple University is in a changing neighborhood — the lot of many city colleges — and the special problems of security, safety and fire hazard become quite evident. A campus without a gate, a campus with scores of entrances that give on busy public streets, offers a constant security challenge to university administrators.

Our use of an outside security force dates back to 1951. There had been earlier occasions on which the university had sought professional help in investigating untoward occurrences that seemed beyond the scope of watchmen and guards then on our payroll. But nearly 10 years ago we made the decision to buy the whole package from the agency with whom we had had these previous dealings. We found other jobs for our old guards, many of whom were nearing retirement, and turned all of our security over to the professional agency. It was a decision we have not regretted.

The advantages of out-contracting security work are numerous. The lower payroll cost, in large part a result of elimination of overtime and night differential pay, is obviously a prime factor in any educational budget. Coupled with this is the freedom from paying fringe benefits — holidays, vacations, pensions, insurance, uniforms and firearms. All these items of expense are handled by the security agency.

But the factor that most appeals to the university official responsible for security is the freedom from the headaches of administration. For one thing, the basic guard schedule through the week must often be augmented for special events and situations that arise. Dealing with a professional agency with its own source of trained manpower, we find it a simple matter to get extra guards for duty at social functions, athletic events, commencements, busy registration periods, and the like.

These needs are indeed variable. Extra guards appear frequently at dances and carnivals in Mitten Hall, our student union building, where they collect tickets, protect money, enforce no-smoking rules in certain areas, and generally see that decorum prevails. The same guards may turn up in formal dress at more exalted functions. They have guarded an art exhibit at the Tyler School of Fine Arts in suburban Elkins Park and have helped handle traffic at a garden party there. Extra guards also are required at midvear commencement and at various athletic events.

The relationship between the university and the security agency contributes to our general satisfaction. The outside agency is responsive to whatever complaints and suggestions we may have. Inevitably, though infrequently, personality factors may dictate a guard replacement. When

such an occasion arises, the change is made at once, and no questions asked — a far simpler matter than the disciplining or removing of one of our own employes. In the main, a large proportion of the guards remain at the same assignment for a long time and make themselves increasingly valuable as they become familiar with our routines and with our faculty and administrative personnel.

The university continues to remain in constant contact and receives daily written reports of guard patrols and other activities. The guards are in no sense proctors and are not responsible for student conduct or infractions, unless, of course, misconduct is flagrant and damaging. But the guards do not reprimand students, nor have they the right to do so. They simply report what they see and leave any action to the university.

The regular security schedule at Temple calls for 736 guard hours per week in the area referred to as the academic center, covering eight city blocks. The university also contracts for 206 additional guard hours per week for two remote assignments, in one case for the dental and pharmacy schools, and also for the structure formerly used by the Technical Institute. Thus, the university is using 942 guard hours per week.

The usual schedule calls for three guards from morning until mid-afternoon; then three more come on duty to remain through the evening. The daytime contingent includes a guard on patrol duty, one at the parking lot, and one in Curtis Hall, Temple University's newest classroom build-

For the period requiring the highest security — 11 p.m. to 7 a.m. — six guards are on duty, one of these being a sergeant, the ranking officer of the entire cadre. The sergeant and two of the guards do night patrol duty, pulling clocks in various buildings, making occasional patrols of the whole area on an electric scooter, and watching the entire plant for intrusion, fire and any trouble or depredations. Of the other three night guards, one is on continuous duty in



GUARD STANDS DUTY in the controller's office at Temple University during the period each day when students appear with cash for tuition and other fees.

Curtis Hall, one in Stauffer Hall, and one in the women's residence hall.

The security problems at Temple University arise out of the neighborhood itself. The security force is not policing students and faculty, except as any considerable group constantly on the move in a constricted space must be protected against its own carelessness and the normal hazards of congregation.

#### **Protect Plant and Personnel**

The guards deployed about the campus and through its buildings are constantly protecting plant, property and personnel from the untoward acts of outsiders. These can be purely mischievous, though seriously damaging in the aggregate, such as destruction of shrubbery and growing things, disruption of classes conducted in close proximity to public lobbies and corridors, horseplay and irreverent sallies into the cloistered domain of teaching.

The untoward acts can at times become much more serious, partaking of vandalism — broken windows and defacement of property. At their worst they include theft and pilferage of student and university property and even threats of assault on darkened streets.

The mere presence of uniformed guards — and all of them on night duty are armed — is a great deterrent to these public nuisances. The guards' mobility is another factor. All sections of the campus are in ready communication with the guard head-quarters, located in the department of physical plant, and a reserve guard can be quickly dispatched to a developing trouble spot.

Credit must here be given to the little electric scooter which, operating silently, can appear from nowhere bearing a guard who will break up the trouble and, if indicated, collar the miscreants. The scooter's top speed is 22 miles per hour; its usual

cruising speed about 15 to 17, but that's a lot faster than kids can run. The university is seriously considering the purchase of a second scooter.

In all matters approaching public disorder or criminal acts, the university has the wholehearted cooperation of the city police, with whom the guards work in close harmony. Even professional guards are well advised not to make arrests in the ordinary course of events, but they can apprehend wrongdoers and hold them until the police arrive.

In this connection, one of the guards on night duty not long ago

# Some Off-Beat Chores Performed by the Guards at Temple

- Keep children out of buildings and backyards.
- Keep vendors and bootblacks from setting up shop on sidewalk.
- Open closets for instructors who forgot keys.
- Escort Peabody Hall switchboard operator home at 11 p.m.
- Escort nurse from health center to bus line at 11 p.m.
- Escort night cleaners across campus at 3 a.m.
- Assist handicapped persons; operate elevators for them.
- Lock all doors and windows when classes are over.
- Check fire extinguishers, pump room, fan room, engine room.
  - · Collect keys from night cleaners.
- Put out security lights in the morning.
- Make complete check of campus on scooter at 3 a.m.
- On patrol, make frequent visual check for red light on top of guard headquarters, which signals that a guard is needed at once.
- Accompany gas, electric and water meter readers (monthly).
- Protect transfer of monies and delivery of fees at bursar's office.
- Carry sidearms at all times on night duty.
- Pay special attention at night to all women's residence halls.

heard a commotion in the hallway of one of the few row houses not tenanted by the university. Investigating, he came upon two would-be robbers administering a severe beating to an elderly installment collector. He held the thugs at gun point until the police were called to take them away. The victim, who recovered, feels that he owes his life to the guard, upon whom he later tried to press a reward. The reward was declined with thanks; such things are against the policy of the better security agencies. We're there to be helpful," the agency official explained.

On another occasion — it was in the summer of 1959 — a guard discovered a chemical fire in a laboratory in one of the converted row houses, the result of the carelessness of an instructor or a graduate student who had left for the night. The guard's fast action aborted a serious fire. It also sent the guard to the hospital suffering from the effects of smoke.

Most guard tours at Temple University are considerably less dramatic, for which we are all thankful. An absent-minded faculty member has left his office keys at home. The guard lets him in. Another has left the lights on after an evening of research. The guard turns them out. Students are forever leaving books and handbags and other impedimenta in classrooms, in lounges and recreation areas. The guard becomes a self-appointed lost-and-found department.

Two guards in sequence man a sizable parking lot across Broad Street from the main campus area. The space is enclosed by a steel fence. The cars of faculty, students, administrative personnel, and visitors are assigned identifying decals, of varying hues, that denote parking privileges by hour and duration. The guard keeps them all straight, meanwhile handling the parking for maximum utilization of the space. And while all guards at Temple University are well versed in the campus lavout, the parking lot guard, especially, is called on to direct visitors to buildings and points of interest.

The security of 300 women students who populate Peabody Hall, the women's dormitory, is in the hands of the guard on duty there all night. His is mainly a fixed post in the entrance lobby, but he also checks

recreation and visitors' rooms and an outdoor patio. In the early morning hours he even goes into the darkened cafeteria to turn on the coffee urns before the staff arrives to prepare breakfast. More than other guards, he also is an enforcer of the rules laid down for students, shooing out male visitors at prescribed evening hours, checking the girls' late passes when they come home, and seeing that they sign the book with the hour properly noted. Some time after midnight, he locks up, and thereafter admits the stragglers when the night bell rings.

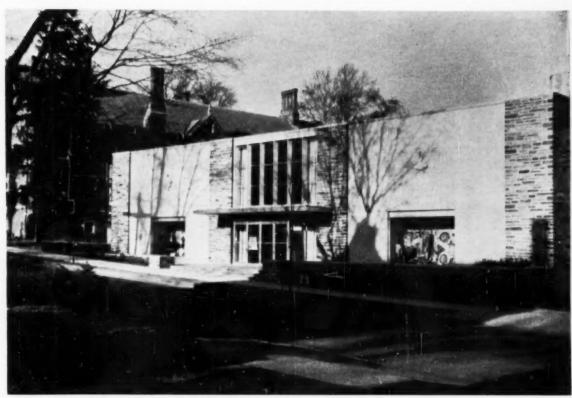
#### **Notes Anything Unusual**

Passes of various sorts are common currency in the life of a Temple guard. Both students and faculty require passes for certain after-hour and week-end work in laboratories and study areas. The guard on post checks all of these passes and makes note of them in the written report he turns in each morning at the office of physical plant. Also on this report are notations of any untoward conditions he has observed on his rounds: fire hazards and potential safety hazards, a light out on a fire stairway, offices left unlocked, windows broken, leaks and property damage. He and his fellows write the perpetual diary of a university untenanted and deserted.

Routine duties, most of these? Perhaps. But it's a great comfort to the administration to know that they are being efficiently carried out, with vigilance, with expert observation, with courtesy and tact. And perhaps it would be of interest to note some of the off-beat chores that these guards perform as well. Listed in Column 1 are a few extracts from the security agency's manual of operations.

The jobs listed, although just a sample, give the flavor of the varied and unique responsibilities of a security force in an urban university.

The frequent inquiries we receive on our security program would indicate that Temple University is pretty much a pioneer in entrusting its security to an outside professional security agency. In our 10th year of the relationship with the same agency, we can only say we are entirely satisfied with the arrangement. We wouldn't go back to our old do-it-yourself watchman system for anything!



Princeton University's new bookstore and merchandising center.

#### Architectural aspects of

# Princeton's 'Supermarket' Bookstore

R. K. Longchamps
Assistant to Eldredge Snyder
Eldredge Snyder, Architect, New York

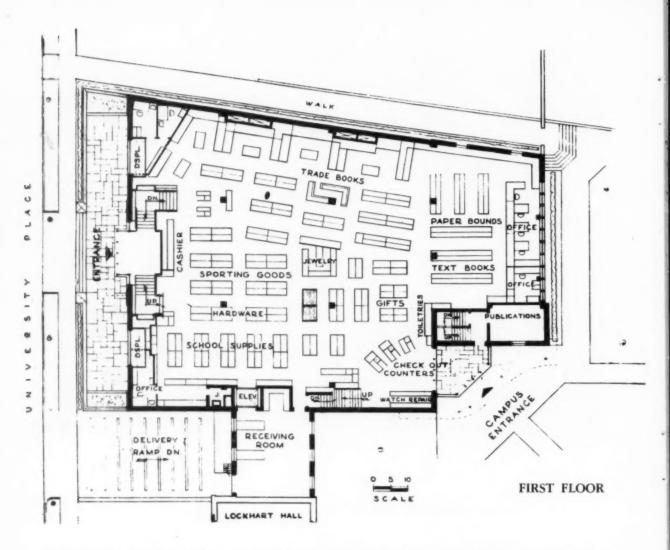
THE old Princeton University store was located in the middle of the campus where it shared a building, well over a hundred years old, with a residence hall. Quite aside from the fact that the space was inadequate, and there was no space for expansion, it was thought desirable to remove the store from the center of the campus to a location where deliveries could be managed more easily.

Moreover, as customers came from the town of Princeton as well as the university, a campus traffic problem of some magnitude was created by the automobiles of customers and by trucks delivering merchandise. What was needed, clearly, was a merchandising center in a location equally accessible to both Town and Gown.

The site selected for the new building was on the edge of the campus. One side of the new location faces University Place, a public thoroughfare, and the other a residence hall section of the campus. Reserved off-street parking is available for off-campus customers just opposite the store.

While primarily book vendors, university bookstores no longer sell books only. In fact, most university stores are now supermarkets dealing in everything but edibles, and often even some of these are included in the stock.

The architect who designed the building was faced with the problem of creating a modern building of a design necessarily reflecting its use and blending with existing buildings on the campus. The Princeton buildings, by and large, are of a characteristic



collegiate Gothic design, built of irregular stone ashlar, the typical Princeton stone.

The architect has designed a split level store, built on a site sloping down from street to campus, so that the University Place entrance is higher than the campus access. The general exterior design employs a stone similar to that used in the trim of the older buildings. While modern in feeling, it harmonizes with the older architectural styles.

The campus facade of the new store building is constructed almost entirely of ashlar with window mullions and trim of limestone. The spandrels giving onto offices of campus publications are of lilliput Holland brick of a greenish tinge. The windows themselves are aluminum.

The University Place front has two large panels of rough sawn limestone flanking the street entrance. In the lower center portion of each panel is a modest display window. In the center of each panel is a sculptured plaque, specially designed for the building by Adlai S. Hardin, president of the National Sculpture Society. The mullions of the large area of glass just over the entrance are also of limestone.

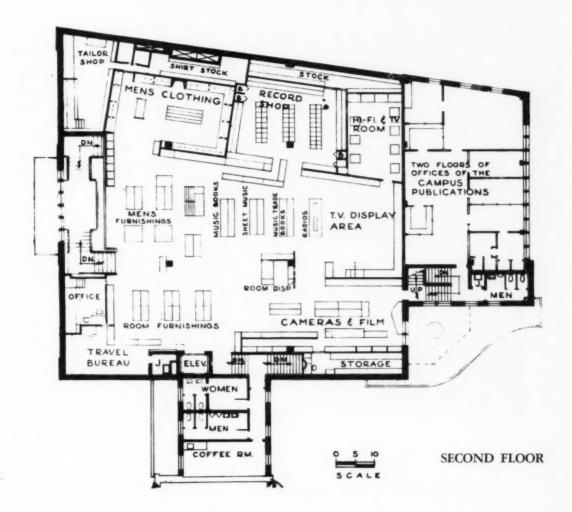
The general construction of the lower part of the building is reinforced concrete. The upper floors are constructed on a steel frame with exterior walls of limestone, fieldstone and aluminum, and backed up with building block and common brick. The interior walls are also constructed of building blocks.

The rough floors are of concrete slab construction with finished surfaces of terrazzo, tile and vinyl asbestos. Where the interior walls are not of exposed brick, which is left both natural and painted, they are of painted plaster. The doors are of hollow metal construction.

The roof is built up on concrete planks, rather than bar joists, which support the lower floors. The inside ceilings are finished with an acoustic material, into which the lighting fixtures have been recessed.

The main stairway, on the University Place side, is made of reinforced concrete, with precast terrazzo risers and treads. Handrails are teak with aluminum balusters and molder plastic panels. The stairway is lighted by the large glass area over the street entrance, which is decorative both from inside and outside the building.

The building is air conditioned. Both heating and cooling are distributed by the same ducts which are hung on the ceilings; the distribution is made from a central machine room



located in the basement. This yearround air control assures all portions of the building a supply of fresh air at all times throughout the year.

Special features of the basement area include appliance, television and typewriter repair shops, all located in windowless areas but all assured of adequate ventilation by the central air conditioning room located on the outside wall of the building. The basement also contains the general offices for accounting and purchasing. One of the special features of this area is a small refrigerated closet specially built for the storage of candy.

The main floor is devoted to the selling of books and sporting goods. F. J. Worthington, the store's manager, has designed special book racks that curve outward at floor level so that book titles on the low shelves are clearly visible. The book orientation is

arranged so that textbooks are racked in the area near the campus entrance, and books of more general interest near the University Place doorway. All items on the first floor are sold from self-service racks, and payment is made at cashiers' desks near the entrances.

The second floor is taken up with specialized merchandising areas. There are record and hi-fi shops, a television and appliance shop, a large haberdasher's shop, and tailor and shirt shops near by. Each shop has a storage area. A travel bureau is located in one corner of this floor, and a camera shop in another. Also in the wing connected to Lockhart Hall are a staff lounge and restrooms.

Beneath this lounge, on the street floor fronting onto University Place, is a receiving room, serviced by a loading platform and truck ramp. An elevator is available to both main store and receiving room on the main floor and connects with the basement and upper merchandising floors.

The campus side of the building rises slightly higher to contain three floors, the lower devoted to part of the book section of the main merchandising floor and the upper two housing offices for campus publications. These offices have their own separate entrance from the campus side.

The Princeton University Store is run on a profit sharing basis with dividends payable to both students (who are automatically members) and others eligible for membership. Gross receipts rose about 15 per cent almost immediately after the new store was opened, which promises well for the future.

On the next page the manager describes novel features and fixtures.

	CONSTRU	CTION DATA		
Item	Cost	Per Cent of Total Cost	Cost por Sq. Pt.	Cost po Cu. Ft.
Structure	\$480,000	69.34	\$16.79	\$12.96
Plumbing	38,000	5.49	1.33	1.03
Ventilation	91,418	13.20	3.20	2.47
Electrical	64,945	9.38	2.27	1.73
Sprinklors	6,702	0.97	0.23	0.18
Elevator	11,203	1.62	0.39	0.30
Total Cost	\$692,268	100.0%	\$24.21	\$18.61

TOTAL AREA 28,594 square feet

Floor Heights: Basement, 10 feet 5 inches. First and second floor, 14 feet.

ARCHITECT: Eldredge Snyder, New York City

TOTAL VOLUME 370,408 cubic feet

#### Management's views on

#### Princeton's Supermarket Bookstore

F. J. Worthington

Manager, Princeton University Store, Princeton, N. J.

THE split level feature of the bookstore at Princeton University is the building's most unusual feature. The



The curved bottom of the book fixtures makes the titles of all books completely readable.

front entrance comes into a landing about halfway between the first and second floors.

The book fixtures are probably the most satisfactory ones we have had. The curved bottom makes the titles of all books housed, even on the bottom shelf, completely readable from a standing position. Working with Ken White Associates, the designer of all our fixtures, we made many mockups of these units, using curves of various diameters, before we were satisfied.

One of the big problems in designing the fixtures was our unwillingness to use any more floor space than was absolutely necessary. As a result the wall fixtures extend out at the bottom from the wall only 20 inches, not counting the bulk display ledge, which is another 9 inches.

The depth of the floor units is 21 inches from center to outside, or 42 inches including both sides. Those floor units housing Modern Library, Everyman and other series, as well as paper backs, are only 18 inches deep per side, or 36 inches including both sides.

One of the nice features of our wall units is the ledge at the bottom for bulk display. Most booksellers will agree that mass displays on table tops will sell more books. The difficulty, of course, is that few stores have enough space for this type of display. We have attempted to provide for mass display of best sellers via this ledge.

In the college store field, the major problem is one of providing space for thousands of textbooks, which are primarily sold during the first week or two of each semester. After these initial rushes, it is not sound merchandising to leave a lot of empty shelves. Yet from a practical point of view, it is difficult to move merchandise, particularly books, on and off these shelves after each rush period. It is a quarterly basis.

At the Princeton bookstore we use steel shelving; this can easily be knocked down and stored for the expansion needed for our textbook rushes. The rest of the year the space is available for additional display of paper back books. We designed paper back fixtures 80 inches high, 48 inches wide, and 36 inches deep (including both sides), with heavy duty casters.

These fixtures can be rolled into our elevator while fully loaded and taken off the floor for storage in the basement while the textbook rush is on. A further small point of interest is the load leveler, installed on the corner of each fixture. These take the weight off the casters when the shelves are not in use and keep the fixtures in an even line even when someone leans on them.

The rest of the store fixtures are more or less what one would normally expect. We have few glass showcases, as most of the merchandise is an open display. We have obtained considerable flexibility, plus a considerable savings in fixturing cost, by adopting a standard gondola 48 inches deep, 60 inches wide, and 54 inches high. These gondolas are merely a metal frame with a center partition (pegboard which can be snapped in and out for repainting or replacing) and the usual shelf standards and brackets.

We use gondolas in all departments of the store, adjusting them to the needs of various departments and various types of merchandise by varying the depth and heights of the shelves, even slanting some shelves, by the use of glass and/or wall board dividers, and by the use of storage bins with doors. The storage bins are inserted on the bottom shelf of the gondola but are not fastened. They are quite useful when the bottom shelf has lost its display value because of the type of merchandise carried on the upper shelves.



South side of remodeled Stilwell Hall. Original structure is shown below.

# From Garage to Classrooms

Ray S. Febo Architect, Cleveland



Former garage

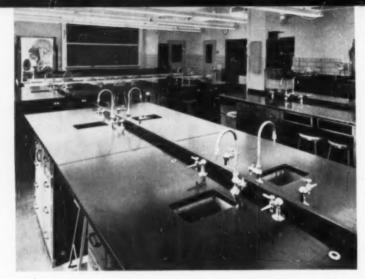
CONVERSION of an automobile showroom and garage to class-room and laboratory space is saving Fenn College, Cleveland, an estimated \$1.3 million. The five-level, fireproof structure doubles facilities of the college by adding 4 acres of floor space to the downtown Cleveland institution.

The building was erected in 1926 and purchased by Fenn in 1953 for \$650,000. (This figure includes land and building.) Architects estimated that the cost of constructing a new building of comparable size would be \$3.7 million. This estimate was based

upon local costs of \$20 per square foot or \$1.58 per cubic foot for this type of building.

However, by making a careful study of the existing structure to determine what was to be retained and by paying close attention to details and selection of materials, the actual costs were 35 per cent lower than the estimate, which is \$12.92 per square foot or \$1.04 per cubic foot.

Located directly across the street from Fenn Tower, the building for many years served one of Cleveland's largest auto distributors. When the structure was put on the sale block,



#### ONE OF 50 LABORATORIES

in the five-story building that Fenn College converted from an automobile showroom and garage.

FIRST FLOOR LOBBY (right)
of Stilwell Hall. Interior finishes,
furniture and furnishings
requiring a minimum amount of maintenance were selected. Glazed and
ceramic tile, composition flooring,
vinyl wall covering, porcelain
panels, all are color-keyed
in modern motifs. CLASSROOM
(below) is one of 31 such rooms in
Stilwell Hall, which has
the functional equivalent of
four buildings on
most college campuses.



Photos, courtesy of Joseph Ceruti and Associates.

college officials, under the leadership of G. Brooks Earnest, Fenn president, and Charles J. Stilwell, board chairman, opened negotiations with the owners.

Acquisition of the building, recently dedicated as Stilwell Hall, put Fenn in position to meet the predicted demands for higher education. Surveys and projections show that 22,000 full-time students will be crowding into Cleveland area colleges by 1975. Because of Fenn's program of cooperative education, which enables students to earn their way

through college on a work-study basis, college officials expect to feel the enrollment flood-tide early. Toward future expansion, at the time of purchase, the college obtained option rights to a 60,620 square-foot property adjacent to the building.

Originally planned as a two-step construction operation with the conversion of the first three floors as Phase 1, Fenn trustees voted in January 1958 to accelerate the program and complete the building for the fall quarter of 1959. Economic conditions at the time of the decision favored this move.



Stripping the original building down to reinforced concrete frame and removing three stories of concrete ramps were necessary steps before any new construction could be started. The quarry tile flooring in the dining room is the only interior finish material that was retained in the new building.

The architect's suggestion to remove the cut sandstone facing and continue custom curtain wall treatment on the east facade was not adopted for reasons of the additional cost, which was estimated at from \$75,000 to \$100,000. The sandstone was sandblasted and tuck-pointed, and face brick was selected to blend.

Modern materials are employed throughout the structure. Porcelainized metal curtain wall, using 4 inch glass block panels, was used to enclose the existing concrete frame. This is thought to be the first major structure to apply curtain wall to an existing concrete frame. The entrance canopy with free-standing vestibule tunnel is sheathed in imported Italian precast marble chip tile.

The architects, who were responsible for all exterior and interior finishes, including all the furniture and furnishings, selected materials requiring a minimum amount of maintenance. Glazed and ceramic tile, composition flooring, vinyl wall covering, porcelain panels, all are color-keyed in modern motifs.

Glazed tile, with special attention to color, is used in all corridors. Strong accent colors are used in short halls. Long corridors have different, but complementary, colors. Fourteen murals of glazed tile are placed at far end locations of hallways to shorten them optically. They are 7 feet high and vary in length from 6 to 20 feet. Color has been used both to enhance the building and to stimulate and teach its occupants indirectly the correct color combinations and good designs. Thus, the building becomes a part of the educational system.

The use of perforated metal pan acoustical ceilings in all corridors serves a threefold purpose: (1) It makes piping readily accessible for ease of maintenance; (2) it eliminates the need for return air ducts by using space above the perforated ceiling as a return air plenum, and (3) it absorbs sound.

Curtailing noise from shuffling student feet in the 156 student capacity lecture-demonstration room, always a problem in auditoriums, is solved by the installation of cork flooring under the seating area. The sloping floor and stepped ceiling of the room maintain further acoustical and visual control. The room is fully equipped with the latest lecture apparatus, and has dimmer controls for lighting and a motor-operated vertical sliding chalkboard.

Movable glass and metal partitions afford maximum flexibility for faculty offices.

The generous size of attractively furnished lobbies on each floor was deliberately planned to provide lounges. These give students a chance to pause, relax or study.

Aluminum conduit is used extensively throughout the building. Conduits are installed for future installation of closed-circuit television equipment.

Locations for vertical plumbing and heating utility risers and returns were preplanned for easy repair or replacement without expensive alterations in walls and ceilings. Also, piping and conduit are color-coded, showing the flow and the use of all piping. The building is heated by a combination system, which uses forced air and perimeter hot water. Each room has individual temperature control. The cafeteria and the lecture-demonstration room are air-conditioned.

#### **Equivalent to Four Buildings**

Fenn's Stilwell Hall is the functional equivalent of four buildings on most college campuses. (1) It is a science building, housing 50 laboratories, workshops, demonstration rooms, and research rooms for undergraduate instruction in the basic sciences of physics and chemistry, and in five fields of engineering. (2) It is an administration building with 30 offices and a classroom building with 31 classrooms, four conference rooms. a lecture-demonstration hall, audiovisual room, and speech clinic. (3) The building houses a 100,000 volume capacity open-shelf library, tripling Fenn's previous library facilities. (4) It is also a commons, housing a dining hall, three faculty lounges, and rooms for student extracurricular and social activities. The dining room, which seats 500 students, was once a showroom for new cars.

Applying a 48 per cent room-station utilization rate (i.e. rooms used 80 per cent of the time with 60 per cent of the stations occupied), Fenn's combined facilities can support instruction of 5400 day and 8700 evening students, according to a report by Consultant Russell L. Ackoff. The new Stilwell Hall, along with Fenn Tower and Claud Foster Hall, constitutes a compact 8½ acre urban campus in downtown Cleveland.

Architects for Stilwell Hall were Joseph Ceruti and Associates.

# Forecasting Food Equipment for the Sixties

Arthur C. Avery

Technical Director, Food Science and Engineering Division U. S. Naval Supply Research and Development Facility, Bayonne, N.J.

THE tall dark man who had walked into my office and whom I quoted at length in last month's issue continued his monologue. He had introduced himself to my friend Don White and me as Professor Schmitt. Said the professor:

"The biggest changes in the Sixties will be in equipment design and in kitchen and food service layout. Through the pernicious influence of the old-time chefs, lack of dynamic research, and the feet dragging of equipment manufacturers and architects, the food service industry has been literally handcuffed.

The renaissance will be more than a break with the traditional, a shift from chefs to cooks and from coal ranges to automatic cooking devices. It will be an entirely new concept. It will be like the chemist with his formulas moving out of his tinv laboratory into the factory where he works with the engineers to develop the equipment and production systems that will permit manufacture of his products at a high level of quality but with a minimum expenditure for raw material, manpower and equipment. They will strive to achieve consistent quality through the removal of all elements of chance and the variability of human judgment. This is what you will be seeking for your food service operation of the Sixties.

"It is highly improbable that automatic food production will be achieved until sometime in the Seventies or early Eighties unless some major scientific break-through occurs. Rather, you will have the same type of setup used in an efficient job-order factory. It will be a compromise with

the best of today's straight-line, short-distance food production with the functional groupings of the job-order factory. Every effort will be made to have foods flow in the shortest possible straight line from storage to preparation, to cooking, to postcooking storage or preparation, to food service. All will be geared to give maximum food production with the minimum expenditure of manpower."

#### "Get Down to Hard Facts"

With all these generalities being tossed about, I became impatient and exclaimed, "Come, come, Professor Schmitt, let us cut out this cloud chasing and get down to some hard facts! How are we going to accomplish all this?"

He smiled thinly and said, "By close cooperation with the purveyor, it is probable that very little stock will be held on hand. The food service manager will tell the purveyor how much of each food material he wants for each recipe, and the purveyor will measure and assemble the ingredients and discharge them from his truck in the order designated by the manager — the meats and other perishables ready to cook and packed in suitable containers to keep them for the prescribed period of time without refrigeration.

"While they're waiting for this system to get started, most feeding operators will go to central ingredient rooms where this assembling, measuring and segregation of the ingredients for each recipe will be performed by a relatively unskilled stock clerk rather than the high salaried cooks. This system not only allows for greater use of bulk-packed foodstuffs but reduces over-all manpower requirements, lessens the amount of weighing and measuring equipment that needs to be provided throughout the kitchen, and increases recipe accuracy.

"All food materials will be handled at or close to waist height from the time they enter the receiving door until they are set on the table by the student. This involves unloading them from a truck body at that height or lifting them up by power conveyors, tail-gate lifts, or mechanical or electrical lifts. From then on it will be merely a matter of moving the product about at approximately waist height by use of skate-wheel, roller or belt conveyors, slides, platform carts, or similar means.

"When a food must go through a succession of steps to prepare it for cooking, every effort will be made to provide gravity flow. For instance, potatoes in a bin may be raised high by an electric hoist. Then a dispensing door in the bottom of the bin will open, allowing the potatoes to flow by gravity into a potato peeler, which sits on a scale. When the proper load weight is reached, the bin closes and the peeler goes through its peeling cycle. Then again, by gravity, the potatoes fall out onto a trimming table; there, after trimming, they are pushed down a chute into the automatic vegetable cutter."

At this point, I interjected, "Professor Schmitt, you haven't told Mr. White that new, more efficient means of peeling potatoes will soon be available. A steam peeler gave us yields of more than 90 per cent as compared to usual abrasion-peeler yields of from 70 to 75 per cent. By the



use of smaller abrasive wheels and finer grit on the wheels, abrasive peelers should be able to give yields of about 85 per cent. Probably lye and flame peelers will never be used except in packing and potato chip plants, but they do give good yields."

#### **Continues With Story**

Professor Schmitt frowned and muttered, "Mr. Avery, are you telling this story or am I!" As I withdrew properly abashed, he continued, "Cooking equipment will provide the most startling changes in the Sixties. Most of the tending, timing, stirring and judgment will be done by mechanical and electronic devices. Oh, there will be times when you will want to 'toss the whole exasperating pile of junk out the window,' but if you can restrain yourself until the bugs are ironed out, I am sure you will find these devices a comfort to have around.

"The steam-jacketed kettles will be smaller, much more versatile, and a pleasure to work around. Steam kettles of the past, because of their size and poor heat distribution, usually have overcooked the food nearest the jacket and undercooked that at the center.

"The new kettles will have variable speed mixers of the scraper type and this feature will not only speed the rate of heat transfer but will keep the product from burning onto the kettle surface. The kettles will have pressure jackets and thermostatic controls, and these will permit accurate heating of products at all temperatures from 100 to 400 F. A built-in refrigeration unit will allow cooling of the product to freezing and thus, when a product requiring both

cooking and cooling is prepared, the food need not be moved about, thereby causing loss of product and manpower. An insulating jacket on the kettle will prevent heat from radiating into the kitchen and also contact burns by personnel, while the thermostatic control will permit easy attainment of the 185 F. simmer that not only will reduce the clouds of steam from the rolling boil but will give better texture and food value retention and will reduce shrinkage."

As Dr. Schmitt paused for breath, Don White added, "A small kettle like that will permit preparation of vegetables as you need them on the serving line, and the temperature range will give you another deep-fat fryer when you need it."

Not to be outdone, I noted, "The navy has developed an electric booster unit, with thermostatic control, that can be inserted in a steam-jack-eted kettle to convert it into a deepfat fryer; it can be hung up on the wall when it is no longer needed. The cost of the booster unit plus the kettle is not as much as that of a comparable fryer alone.

"We also have a 40 quart kettle over which is built a 40 quart mixer. It will kettle-cook, deep-fat fry, refrigerate to freezing, pressure-cook, pressure-fry, and bake. The mixer has all the normal attachments, plus one that peels potatoes so that they can be peeled, washed, cooked, mashed and held until serving, all in the same device."

Professor Schmitt continued, "Where large kettles are used, their unloading will be facilitated by portable food pumps that will draw from the bottom and discharge the kettle contents directly into serving pans. In the future, it is probable that kettle lids will be pressure-tight so that the application of air pressure above the kettle contents will allow them to be transferred by pipe to wherever they are needed.

"With some of the new plastics that are available to coat kettle interiors and prevent foods from sticking, automatic in-place washing of kettles and pipes will be as feasible to the food service industry as it is now to the milk industry. Mr. Avery can tell you of experiments his people did on plastic coated bread pans; 2000 bakes without greasing or washing were feasible."

But as I opened my mouth to explain that the plastic coating is also effective with such foods as meat loaf, cookies and custards but that its cost is high, Professor Schmitt raced on:

"Ovens are grossly inefficient with the variation between the hottest and





coldest points of the oven compartments sometimes reaching 150 F. Reflective interiors of aluminum and stainless steel have helped somewhat as has better placement of heating elements and controls, but it was not until forced air movement was developed that evener temperatures could be reliably obtained.

"The navy did its first work in 1952 with a squirrel cage fan in the top of the oven. Later it developed an oven with the heating elements off to one side with a blower to pick up and circulate the heat. On the basis of this work and that done at Michigan State University and the American Gas Association, a commercial forced air oven was developed. A few bugs have had to be ironed out and methods for optimum use will have to be developed, but it looks like one of the ovens of the Sixties.

"Other features that we will see more of in the future are ovens adjustable to the height and space occupied by the product. The navy found that submarine cooks who habitually obtained meat roasting losses above 35 per cent in an oven 13 inches high could not help but get the losses down to 20 per cent when the oven height was lowered to below 8 inches. Also, if the cook closed the vent, left the oven shut during the cooking procedure, and identified doneness by a meat probe connected

with an external reading dial, losses below 15 per cent were possible. Also probable in the Sixties are automatic loading and unloading equipment for reel and conveyor ovens and an oven deck for batch ovens that will roll the product out when the meat probe indicates it has reached the desired temperature.

"Also not to be forgotten as a possible oven is the automatic pressure cooker with an infrared browning unit. While it got off to a bad start because of material failure, the idea is still good. At any rate, we shall see more of these automatically controlled units behind the serving line, where they will prepare vegetables as they are needed. As we experiment with these, we'll find that they and the small tilting kettles will almost replace the big cauldron and pots of vestervear. An innovation that will be used with the small kettles will be a mixer mounted on a rail so it can be slid from kettle to kettle as needed.

"Griddles and grills will assume a variety of forms designed either to speed the griddling operation or to make a better exhibition. Griddles will cook both sides of the food at the same time by means of a second griddle coming down on top of the product, or by infrared rays, or by reflected heat."

I broke in, "In some experiments I once ran, I found that the double-

sided griddle permitted the cooking of steaks, hamburger patties, French toast, griddlecakes and even biscuits in half the time normally required. The products looked good, too, if the steam were permitted ready escape."

Professor Schmitt frowned and said, "Mr. Avery, please! You interrupt my chain of thought. Let me continue! In addition to the steel griddles, as you now know them, there will be aluminum griddles of new alloys with almost the hardness of steel but with most of the even heat distribution qualities of aluminum. Griddles will have as much heat input as the food material can readily absorb in order to shorten cooking time and speed reloading.

"Deep-fat fryers will see much greater use despite the cholesterol scares. New fats, batters and breadings will keep the food from absorbing as much fat as is now the case. All fryers will be boosted in power input to permit greater fryer loads, better quality of fried products, and lower fryer temperatures. The result will be longer life in the fats and less waiting for fryer recovery between loads.

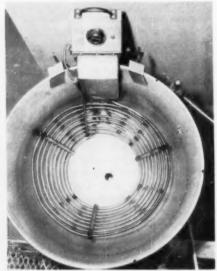
"A rash of devices will automatically lower a product down into the fat for a set period of time and then raise it out."

Then I admonished, "Operators will have to use constant weighed or measured basket loads and consistent prod-

Submarine galley of the future, capable of preparing food for 150 men in space that formerly was required for taking care of 85.



View of steam-jacketed kettle with an electric booster frying element in place.



uct piece sizes the same as with the automatic pressure cookers." But Professor Schmitt hurried on, "There will be more continuous fryers that will automatically load the fryer, carry the product through the fat at a controlled rate of speed by means of a screw conveyor or wire belt, and then raise it out into a storage receptacle.

"Coffee urns will be automatic as the coffee grind will be fed into a brewing cylinder with a measured quantity of water. After the brewing, the brew will be filtered and the grounds will be automatically dumped down the drain. This will proceed without human control whenever the storage cylinder starts to run low on brewed coffee.

"In conventional urns, as you now know them, there will be nylon leacher bags that will last for a year or leachers using offset perforated metal plates that will probably last the life of the urn. The navy has developed both of these.

"In some large installations, coffee or other beverage service will be automatic. The beverage will be made in a centrally located hot or cold tank and piped to the serving line where it will be automatically poured into the cup by a filling device similar to a milk bottle filler. Removal of the cup will complete an electric-eye circuit and another cup will be filled.

"Another change on the serving

line will be the thermoelectric element in serving tables so that they can be either hot or cold merely by a change in the direction the current is sent through the device.

"Another heating material will find a multitude of uses where we presently use gas burners, wires, rods and similar high-density heating elements. It can be sprayed as a film on the outside of sinks, steam tables, pots, griddles, frv kettles, or ovens, and be thermostatically controlled to give whatever temperature is needed. Originally developed to keep the oil and fuel lines of high altitude planes at required temperatures, this product has potential kitchen applications that are just starting to be realized. Mr. Avery's research laboratory is using it on three-compartment sinks, on a submarine steam table, and on a universal pot to keep each at a set temperature."

As my name was being used, I felt that I could interject the remark that "another material is being placed in flexible plastic sheets to provide flexible covers, pouches and the like for keeping foods hot."

#### **Professor Schmitt Continues**

Then Professor Schmitt went on with his dissertation, "I haven't said much about refrigeration. In the kitchens of the future some of you will have little use for the large reefer boxes as we now know them. You will receive only that quantity of refrigerated or frozen food that you need for the day's recipes, and that will be packed in insulated boxes so that it will keep until you are ready to use it. Even milk can be stored in 40 quart thermos milk cans for 20 hours with only a 10 degree rise.

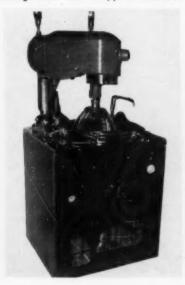
Where this method of operating is not used and in vertical reach-in salad and dessert refrigerators, there will be a system that uses cold supersaturated air under forced draft. It has been found that vegetables and fruits keep much longer and in better condition in an environment of this type and the foods need not be covered to prevent surface drying. It is probable that salad and chilled dessert bars will also use the same system. At any rate, most of the commercial refrigerator companies will come as close to providing a moisture saturated air system as is economically feasible.

"Probably the only food service operators interested in maximum moisture refrigerators will be those who have to store produce for long periods of time. In addition, for these persons, there will be refrigerators that will maintain from 32 to 34 F. temperatures, as the United States Department of Agriculture and the navy have found that the difference between 38 F. and 32 F. means al-

Refrigerated steam-jacketed kettle has pour-over unit for making coffee.



Universal mixer kettle showing whip being used for whipped desserts.



Deep-fat fryer with basket-lift-out device. Note the timer in center.



most double storage life for lettuce, celery and tomatoes.

"In the Sixties, refrigerators will be lighter, as vacuum and the new lightweight plastic foams will give better insulation for less weight than presently used materials. This will permit the mounting of boxes on wheels so that they can be moved to any location where they are most needed.

"All successful operations will find it necessary to use personnel more efficiently and to provide working conditions as goo'd as those in the best food factories and other industries. Indeed, if the food service manager wants to get highest productivity for his labor dollar, he'll anticipate and provide for these needs. Remember that while a good athlete can generate strength up to 5 h.p. for a few seconds, the average worker is but the equivalent of a 1/3 h.p. motor and thus should not be worked like a horse.

"While I cannot give a complete picture of human engineering in kitchen design, I will hit on a few of the highlights.

"Every location where vision-based decisions must be made, equipment or material selected, accurate measurements made, numbers, letters or words read, written notations made, or careful handwork accomplished, should be well lighted. These locations include: oven interiors, griddles, deep-fat fryers, steam-jacketed kettle interiors, cupboards, refrigerators, storage racks, workbenches, sinks, the discharge end of the dishwasher, the serving counter, and the receiving room or platform. Decisions made by use of the eyes are deceptive enough without their being compounded through inadequate lighting.

"Similarly, every effort should be made to bring controls and temperature indicating devices up where they can be easily read and used. While the best location for the controls is on the right side and above the device, the best location for the indicating dials (except for ranges) is on the back and as close to the working surface as is feasible so that the eyes will readily see the important temperature without straying too far from the cooking food.

"All worktables and griddle tops where light manipulative work is performed should be adjustable to a

height 1 or 2 inches below the elbow of the operator who uses it most. In the near future, all working tables and similar equipment will be readily adjustable every time a worker uses it. Work done on equipment at this height would include: hand chopping vegetables, vegetable trimming, making salads, making pies, light meat cutting, making up plates, and similar jobs.

"For heavier jobs, the table should be at the point where the wrist bends when the arms hang by the sides. Work done at this height includes: handling heavy bread or roll doughs, meat cleaver work, boning hams and so forth.

"Similarly, when setting a piece of equipment on a table top would raise it above comfortable working height, it would better be placed on a recessed platform to reduce danger and discomfort.

"Temperature, humidity and noise levels should be kept at a comfortable level. A worker who is very uncomfortable makes many mistakes, is inefficient in his use of time, is accident prone, and is frequently on sick leave or is job hunting."

#### "Reduce Aisle Widths"

"Aisle widths should be reduced to the minimum necessary — probably 36 inches where a man works on one side only, 42 inches where employes work on two sides, and a little more when men or carts must pass behind them. Similarly, working back and forth across an aisle should be made unnecessary by worktables being placed beside heavily used equipment, and, in many cases, on both sides of the equipment if possible.

"The places where this tenet is oftenest violated is beside the griddles, frvers, ranges, mixers and kettles. Sometimes it is not feasible to have a table beside the kettles; in this case the cook should have portable shelves that hang on the outside of the kettle or small wheeled tables that can be moved wherever needed. For pressure cookers, ovens and reach-in refrigerators, it is usually better to have a set-down table close in front of the equipment for quick set-down of hot pans or cold materials with a minimum of back and forth motion.

"All frequently used equipment should be stored so that it is readily

available at the points of first use and on the side of the work area closest to the hand that will use it. Inexpensive equipment and condiments used in a number of places should be duplicated in each location. Storing knives loose in drawers doesn't help the knife edges, is dangerous and time wasting, and should be forbidden.

"Equipment used frequently should never be stored in a drawer as it takes too many motions to get it out. Equipment that is stored in a drawer should have a definite location to obviate searching.

"A general rule that can be followed is that equipment should be grouped according to the most used combinations and in the order of the most frequent interuse. Similarly, those jobs that require the most skill should be grouped around the man having the skill. Do not waste his time in unnecessary walking, gathering ingredients, stooping, tending or waiting. Use his skill as if it were precious. It is!

"While I haven't covered all the subject, I have said what I came to say. I hope that it has given you renewed hope for the Sixties." With this, Professor Schmitt arose, drew some posters from his briefcase, and handed them to Don White, saying, "For my consideration I would be grateful if you would place these on various bulletin boards." With that, he departed.

#### His Ideas Were Familiar

As he left, I mused out loud, "What an extraordinary man! I agreed with every word he said. Every idea of his was so familiar I could wear it like an old shoe."

"Well, it should be familiar," said Don. "He was quoting verbatim from one of your articles." From under the posters he withdrew an old copy of a trade journal to which I had contributed sometime ago. Then the various blocks began to fall into place. No wonder the information was so familiar. But how was he able to quote me almost exactly? On turning over the poster, the answer was apparent. It read: "Presenting at Community Hall on 22 August. Prof. Manfred Schmitt, the man with the photographic memory and mind reader extraordinary. To see and hear him is to believe him."

### State-by-state report of South's progress on

# Integration in the Colleges

Marvin Wall

Former Staff Member, Southern Education Reporting Service, Nashville, Tenn.

MANY a young southerner who has attended segregated schools all his life is likely to find himself in a desegregated classroom when he goes to college, the latest survey by Southern School News indicates.

More than half the South's public colleges have desegregated. By contrast, just over one-fourth of the region's 2834 bi-racial school districts have desegregated.

The Southern School News survey showed that of 199 predominantly white public colleges, 116 are desegregated. Of 38 predominantly Negro colleges, 14 are desegregated. This makes 130 desegregated tax supported colleges among 237. No exact figures are available on desegregation in private

Figures are unavailable on the extent of desegregation in private colleges.



colleges. Practices vary widely in private colleges, and some of these institutions are reluctant to disclose their racial policies. Some private colleges have started desegregation in the face of state laws, still on the books, which require segregation. Sometimes, private colleges feel that the less said about their desegregation plans, the better are desegregation's chances.

#### **Colleges Lead Lower Schools**

Generally speaking, college desegregation began sooner and has spread more rapidly than desegregation below the college level. Of the 17 southern and border states that maintained compulsory segregation in their elementary and secondary schools at the time of the Supreme Court's 1954 decision, 12 had at least some college desegregation. Florida is the only state to initiate college desegregation subsequent to the 1954 decision.

In four Deep South states — South Carolina, Georgia, Alabama and Mississippi — all public schools, including colleges, are segregated. The University of Alabama is still under federal court order to accept qualified Negro students, but none have enrolled since Autherine Lucy's tumultuous three-day stay on the campus in 1956. A suit by two Negroes asking admission to the University of Georgia is pending in federal court.

#### **Most Progress in Border States**

Desegregation of tax supported colleges in the southern region dates back to 1936, when a state court ordered the University of Maryland to admit a Negro law student. When the U. S. Supreme Court decision was rendered in 1954, the university's undergraduate courses became fully desegregated. Now an estimated 300 or 400 Negroes attend predominantly white colleges in Maryland.

Arkansas in 1948 took a look at the trend that admission suits were taking and decided to admit a Negro graduate student to the University of Arkansas. After the U.S. Supreme Court's implementation decision in 1955, all state supported colleges in Arkansas were desegregated. Now 38 or 40 Negroes are enrolled in the eight predominantly white public colleges in Arkansas.

West Virginia, Oklahoma and Kentucky are other states in which the

Supreme Court's decision sped college desegregation.

In the mid-Twenties, West Virginia admitted Negro students to extension classes of West Virginia University. In 1938, Negroes were admitted to the university's graduate and professional schools. Within a few days after the 1954 decision, state officials ended segregation at all college levels.

Oklahoma admitted its first Negro to the University of Oklahoma in 1948, but the state waited until after the Supreme Court's implementing decree of 1955 before abolishing segregation at all colleges.

The University of Kentucky opened its graduate schools to Negroes in 1949 under federal court orders and in 1955 opened its undergraduate schools without further litigation. All eight of the state supported colleges and universities are desegregated in practice or principle.

The year 1950 was important in the chronology of college desegregation. Five states — Missouri, Delaware, Texas, Virginia and Louisiana — desegregated public colleges in 1950.

A state court opened the University of Missouri to Negroes in 1950. All tax supported colleges in the state now are desegregated in practice or in principle. At least 2500 Negroes are believed to be enrolled in desegregated Missouri colleges and universities.

Delaware opened its only white college to Negroes in 1950 under a state court order. Both the previously all-white and all-Negro state colleges now are desegregated.

#### Six Have Limited Desegregation

A U.S. Supreme Court decision opened the University of Texas to Negroes in 1950. About 30 of 51 public colleges and universities are desegregated in practice or principle today. The University of Texas case proved to be an important one. By introducing a number of intangibles, such as alumni influence, it as good as ended the 1896 separate-but-equal doctrine and foreshadowed the 1954 decision.

The University of Virginia was the first public college in that state to desegregate. A court order compelled it to admit a Negro to the law school in 1950. There has been no litigation at

the college level since then, and four of seven state colleges now have a total of 54 Negroes enrolled.

In Louisiana, 634 Negroes are enrolled in five predominantly white tax supported colleges.

All three branches of the University of North Carolina have been desegregated since five Negroes entered the university law school in 1951. Of the state's 17 tax supported colleges and universities, six have accepted students of another race.

All but two of Tennessee's state operated institutions of higher learning have desegregated since the University of Tennessee admitted Negroes as graduate students under a court order in 1952. However, these two schools are under the state board of education, which has removed race as a factor for admission.

#### D.C. Moved Quickly

The District of Columbia moved quickly to desegregate after the 1954 decision. The district merged its two uni-racial colleges and began complete desegregation of its grade schools in 1954.

Florida, in 1958, became the last state thus far to initiate college desegregation.

At most predominantly white colleges, the number of Negro students is relatively small and many of these Negro students are enrolled in graduate and professional schools. The early admission suits were spearheaded by Negro graduate and professional students, because it was at these levels that Negro tax supported colleges most often fell below comparable white institutions. In some cases, instruction sought at graduate and professional levels wasn't even available at Negro colleges.

Summing up, the 17 state southern region can be divided into three groups regarding college desegregation. Desegregation is substantial, if not complete, in seven states - Arkansas, Delaware, Kentucky, Maryland, Missouri, Oklahoma and West Virginia - plus the District of Columbia. There is limited or partial desegregation in Florida, Louisiana, North Carolina, Tennessee, Texas and Virginia. All public colleges and virtually all private colleges are segregated in the four Deep South states of Mississippi, Alabama, Georgia and South Carolina.

### Retroactive effect of legislation on

# TORT LIABILITY

T. E. Blackwell

Educational Management Consultant, Washington University, St. Louis

THE supreme court of New Jersey, in 1958, abandoned its long-held doctrine of tort immunity for educational and other charitable organizations.1 Shortly thereafter, the state legislature, by temporary legislation,2 rejected this action of its supreme court and declared that all charitable corporations within the state, except those organized for hospital purposes, should continue to enjoy tort immunity. The tort liability of nonprofit hospitals was limited to \$10,000 for each claim. Before the expiration of this temporary act, the legislature, after public hearings, decided to enact permanent legislation3 with the same provisions.

#### Of Profound Significance

This action of the New Jersey legislature is of profound significance to all those concerned with the administration of nonprofit institutions of higher education. It marks the first reversal of the powerful trend, begun in 1942, to destroy the wall of protection for the trust funds of such institutions.

For many years, educational and other charitable organizations in many states were not financially liable for the negligent actions of their officers, employes and agents. This immunity was usually based upon what was termed the "trust fund doctrine," i.e. to permit recovery of damages from the trust property of such institutions would result in a diversion of charitable trust funds from the purposes for which they vicre given.

In 1942, Wiley Blount Rutledge, trained as a professor of law, delivered a devastating opinion against this rule of charitable immunity. At the time he was serving as an associate justice in the U.S. Court of Appeals for the District of Columbia, but a year later he was appointed a member of the Supreme Court of the United States. The decision, involving Georgetown College,4 has had a profound effect upon the law of torts in this country. State after state, by judicial decisions, abandoned the well established doctrine of tort immunity for charitable institutions. Without prior notice, such organizations suddenly found themselves in the same position as business corporations and private individuals.

#### **New Jersey Case**

On May 23, 1958, a resident of the Y.M.C.A. at Orange, N.J., filed a suit for damages for personal injuries, caused by the alleged negligence of the association in May 1956. The association argued that the plaintiff's action had been barred by the act of the legislature restoring complete tort immunity to charitable corporations of the state other than hospitals. The trial court ruled that the protection extended by the legislature could not be invoked because the accident had occurred prior to the action of the legislature overruling the action of the state supreme court. The supreme court of the state upheld5 the decision of the trial court. The following is an excerpt from the majority opinion of the court:

"It is well settled that, in judicially construing a statute, its terms are not given retroactive operation unless they are so clear, strong and imperative that no other meaning can be annexed to them, or unless the intent of the legislature cannot be otherwise satisfied. And, if retroactive application would result in unconstitutional impairment of vested rights, it would be generally presumed that the legislature intended the statute to operate only prospectively."

#### Retroactive Effect

It should be noted that the court, although unwilling to permit the action of the legislature to relate back in time so as to extend its protection of tort immunity to charitable corporations, was, in fact, giving retroactive effect to its own action in sweeping away the long established wall of protection. At the time of the accident, i.e. May 1956, and until the decision of the court in 1958, charitable corporations enjoyed complete immunity from tort claims. By holding the Y.M.C.A. liable in tort for an accident that occurred while it still enjoved immunity, the court was giving retroactive effect to its own abrogation of tort immunity for charities. This unfortunate effect of judicial action, when long established precedents are disregarded, is the basis for the argument that, if public policy

<sup>&</sup>lt;sup>1</sup>Collopy v. Newark Eye and Ear Infirmary, 27 N.J. 29, 141, A. 2d 276 (1958).

<sup>2</sup>Laws of 1958, Chap. 131, R.S. 16: 1-48 et

<sup>&</sup>lt;sup>8</sup>N.J.S.A., 2A: 53 A-7 et seq.

<sup>\*</sup>President & Directors of Georgetown College v. Hughes, 130 F. 2d 810 (1942).

<sup>&</sup>lt;sup>6</sup>La Patte r. Y.M.C.A. of the Oranges, 30-N.J. 225, 152 A. 2d 340 (1959).



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HOLLAND, MICHIGAN

seems to demand the abandonment of tort immunity for charities, the action should be taken by the legislature, after full public hearings and notice to all concerned, rather than by the courts. And, as was brought out at the hearings called by the New Jersey legislature, public opinion in that state apparently was not ready to impose unlimited liability for tort on charitable trust funds.

The state college or university, as an instrumentality of the sovereign power of government, exercising and conducting a necessary function of government (in contradistinction to the so-called "proprietary functions of government") normally is immune from suit. This immunity is based upon medieval philosophy of English common law, carried over into our American jurisdictions without adequate rationalization, and expressed in the legal maxim, "The king can do no wrong." In the absence of statutory permission, no one may bring suit against a sovereign state or an instrumentality thereof for injuries inflicted in the exercise of its sovereign functions. Education is recognized as a primary or sovereign function of government. Hence, it follows that a public institution of higher education is immune from suit unless the state has seen fit, by statute, to set up administrative or judicial machinery to hear and adjudicate claims.

This immunity was upheld recently by the court of appeals of Ohio in a case involving the hospital of Ohio State University. The following is an excerpt from the opinion of the court:

"The Ohio State University Hospital is operated by the board of trustees of the Ohio State University, and said board is an arm of the sovereign, the state, and the latter has neither authorized, nor permitted, by any law, its agents to be sued for tort to either person or property. The only remedy which the state of Ohio has seen fit to provide for persons who may be injured and have a just claim is to establish a Sundry Claims Board, to which claims may be made. The Sundry Claims Board, however, cannot be sued. The Ohio State University board of trustees clearly has the authority under the statutes of Ohio to operate the Ohio State University Hospital as a part of its teaching program."

"Wolf v. Ohio State University Hospital, 158 N.E. 2d 909 (1958).

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# Purchasing in the Decade of Abundance

E. F. Andrews
Director of Purchases
Allegheny Ludlum Steel Corp.
Pittsburgh

A T THE beginning of 1960, the unanimous opinion of the forecasters was that we were entering into the golden Sixties, the decade of abundance. Nearly every publication, every report, and every forecast spelled out in glowing terms what a wonderful, abundant, affluent society the decade would witness.

We must admit the fact that we are living in a society of abundance. We have more goods and services at our disposal, more things to enjoy, and more time to enjoy them than perhaps any society in the history of man. Our standard of living is the highest in the world today.

A hundred years ago we employed seven million people, and 65 per cent of all work was done by man, 35 per cent by machine. Today we employ 70 million people, and only 11/2 per cent is done by man, the rest by machine. This, in itself, has led to the increased standard of living and the increased amount of leisure we enjoy. Yet we have orchestras that get paid and don't play, and nearly every other craft is limited in the amount of work it can perform in a given period of time. The railroads charge that feather-bedding is costing them nearly \$500 million annually. The affluent society seems to carry with it a freeloading society.

New words have crept into our vocabulary — payola, buyola and rigged TV — to augment the old stand-by, government graft. This makes us wonder whether our abundant society carries with it a degradation in moral standards. It would seem that we believe in free speech, free press, free thought, free love, free currency, and free-loading. We have developed easy ways to do our work, easy ways to get through school, easy ways to pay our bills, and easy ways to save our souls.

#### An Intellectual's Argument

Now an intellectual examining the social picture would tell us that, although we may have arrived at this pinnacle of living by free enterprise, our economic attitudes are basically rooted in poverty and the very prin-

ciple of our competitive system is survival of the fittest. We reward the successful; we penalize the unsuccessful, he might argue.

The two basic ingredients of the competitive system are insecurity and inequality, and yet our intellectual would point out that we in the business community have been doing everything in our power to eliminate insecurity and inequality. We have an income tax, antitrust laws, tariffs, trade unions, inheritance tax, patents, administered prices, market tests, diversification, social security, unemployment insurance, pensions and seniority. Because of these measures, he would say that we do not really have a competitive system, nor do we really want a competitive system gross national production is the only important thing in the businessman's mind today.

We are likely to say that such and such a vear was the best vear in our history. No one even stops to ask "Best year for what?" because everyone knows we refer to gross national production. It may not have been the best year for art or science; for education or health. Our intellectual tells us that business has really stopped doing research. It is now merely doing innovation so that we can sell more and more and increase gross national production since this is what makes our economy run. And he gives us examples: higher fins on automobiles, exotic foods, vo-vo's.

#### Takes Issue With Cures

We may not disagree with the analysis of the problem by this expert in the field of economic growth, but we may well have to take issue with the recommendations or cures he offers to the problems. We have all read, in recent months, many such recommendations being made as answers to the question of how to control inflation and how to sustain economic growth. Some of the remedies suggested have been: We should raise wages; we should subsidize unemployment; we should control prices and profits; we should raise taxes; we should reduce the work week, and the government should be responsible for all research activities. On these pro-

From a paper presented at the National Association of Educational Buyers, Pittsburgh, 1960.

posed "cures," I believe, some of us differ with the experts.

I do not believe that the American industrial machine has failed in producing true progress through research. Let's assume for a moment that the age of man is 50,000 years. It took man 50,000 years to advance from the speed of walking 5 miles an hour to the speed of a horse, 30 miles an hour. But within the last 50 years (the industrial years of America) we have advanced from the speed of a horse, 30 miles an hour, to the speed of a rocket, 18,000 miles an hour. The same comparison could be made in many other fields of endeavor.

Mr. Krushchev spelled out the current situation very well in two words when he said, "Let's compete." American industrial power must prepare itself to compete on a world market as it did several years ago, when we got ready to compete on a truly national market. In order to prepare for this competition, we must:

Have improved laws of depreciation.

Give tax consideration to the research dollar.

3. Recognize the power in our unions and legislate accordingly.

Take a hard look at our educational processes.

5. Accept responsibility for political activity.

6. Have some good old-fashioned reduction in purchasing costs.

7. Take a long look at our moral and ethical standards.

According to Steel magazine, the United States is the largest producer in the world of automobiles, steel, machine tools, and radios, and yet import of these items has been the highest in our history. We claim to be the nation that has led the way in industrial democracy, and yet our unions are striking for higher wages when wages are already from three to eight times higher than those of our foreign competitors. We have been famous for our production efficiency, yet a large percentage of our wage dollar is being paid for labor that is not performed. We boast of our industrial atmosphere and progress, and yet we are hobbled by depreciation laws that are 30 years outdated.

What can we purchasing agents do? Cost reduction, of course, is an old tune in the purchasing department. Good hard-nose value analysis in buying has yet to find a good substitute. We must start looking at our buying job as one of maximizing the total return on the total investment, because getting a lower price is not good purchasing. Making a lower cost possible is good purchasing.

We can interest ourselves in the educational process. It is believed, in some quarters, that we may be carrying our standardization programs so far that they have entered into our school processes; that we may be turning out standardized people at the sacrifice of creative thinking.

The businessman, the purchasing

man included, must become active in political matters. To go to Washington in February or March and ask that certain laws be passed or voted against is almost futile when the real decision was made at the election in November.

I believe the businessman must consider the moral and ethical responsibility he has as a leader of his community and make sure that he conducts himself in a manner above and beyond question. "What is a man profited if he shall gain the whole world and lose his own soul?"

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White, Weld & Co. has been one of the leading investment banking firms in college revenue bond financing. The benefits of our accumulated experience are yours for the asking. If you would like to know more about how other schools have used revenue bonds for expansion, improvements and added facilities, please contact us in Chicago or at any of our other offices.

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# **NEWS**

Are Prexies Being Duped by Trans-Atlantic Diploma Mills? . . . Move To Aid Airican Students Grows . . . Harvard Opens S2 Million Drama Center . . . U.S. Will Finance University in Ethiopia . . . Wagner Campus To Become Arboretum

#### Princeton Building Made Federal Historic Landmark

PRINCETON, N. J. — The oldest building on the Princeton University campus and the Capitol of the United States for six months in 1783, Nassau Hall, was designated by the Department of the Interior as a federal historic landmark.

During the Revolutionary War the hall was occupied as a barracks and hospital by British and American troops in turn. Its capture by George Washington ended the battle of Princeton on Jan. 3, 1777. Erected in 1756, Nassau Hall housed the entire college for nearly half a century after its completion. It is now used entirely for administrative offices.

#### Harvard Realizes Theater Dream

Cambridge, Mass. — The \$2 million Loeb Drama Center of Harvard University has been dedicated here at a ceremony attended by prominent alumni and faculty members.

The opening of the theater marked the fulfillment for Harvard of a long-felt need. It was lack of adequate theater facilities that drove Prof. George Pierce Baker from Harvard to Yale 35 years ago. The late Professor Baker had taught such Harvard students as Eugene O'Neill and Thomas Wolfe.

With seats for 588, the theater may be arranged as an Elizabethan apron stage, as an in-the-round multi-level platform, or as a standard proscenium stage with the flick of a stagehand's wrist. Electronic lifts and winches are part of the theater's make-up.

The building's exterior is red brick, glass and aluminum grillwork. In addition to the main stage and auditorium, the building houses a small, experimental theater, in which platforms and a maximum of 100 seats may be arranged at will, and contains a highly flexible lighting and scenery loft.

Harvard envisions the center, made possible by a \$1 million gift from John L. Loeb and from funds contributed by other alumni, as a stimulating, extracurricular activity for its students and faculty.

#### American Colleges Sponsor African Aid

New York. — A large-scale scholarship program, designed to bring as many as 200 qualified African students to the United States, and being sponsored by 24 American colleges and universities, is being expanded to include an additional 75 to 100 institutions.

The program will commence in the fall of 1961. Students will begin four years of study for an undergraduate degree. Sponsoring schools are also developing plans to continue the program for three additional years to provide a college education for a total of 800 students.

A private, nonpolitical and nongovernmental effort to help meet the critical educational needs of the African countries, the program willbe managed by an inter-university committee with offices at Harvard.

# Emperor Thanks U.S. for University Offer

Address opening Ethiopia's Parliament, Emperor Haile Selassie expressed gratitude to the United States "for aiding us in the realization of a university."

The American offer to begin construction of Ethiopia's first university was made after the Soviet Union presented an outright gift of a technical school to serve 1000 students.

# Pressure Forces Review of Turkish Ousters

ISTANBUL, TURKEY. — Gen. Cemal Gursel, the head of Turkey's five-month-old government, has admitted that some "mistakes" might have been made in the recent application of new university reform laws. His revolutionary regime dismissed 147 university professors.

Newspaper criticism and the resignations of four respected university heads prompted the conciliatory statement by General Gursel.

Sidik Sami Onar, rector of Istanbul University and a central figure in the student demonstrations that led to the downfall of Premier Adnan Menderes's regime, was one of the group who resigned in protest. Mr. Onar expressed regret over the situation and said, when he heard of the dismissals:

"I went to the university to pack my things."

General Gursel has promised to review the dismissal of the scholars.

#### Action Needed To Curb Mail-Order Diplomas

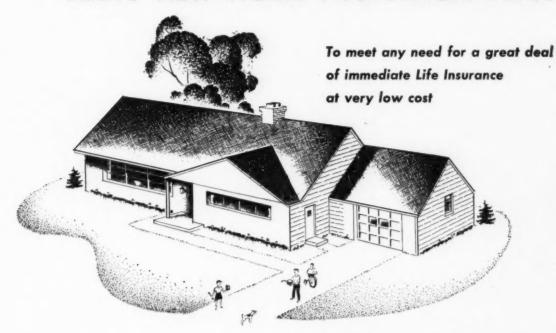
New York. — Worthless academic "honors" are being sold to American scholars by trans-Atlantic diploma mills. Among those being duped are college presidents, it is charged.

Authorities believe that some undergraduate and graduate diploma mills operate directly with the mailhonors business, the *New York Times* reports.

A sharp increase in the business has taken place and, although it is impossible to estimate the amount of money paid, postdoctoral mail-order honors have become a highly profitable enterprise.

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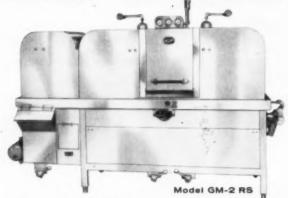
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As an illustration of the plan's low cost, a 20-year policy providing a \$20,000 initial amount of insurance issued to a man age 30 calls for a level annual premium of \$77.20. The cash dividend of \$31.60 at the end of the first year reduces the first year net cost to \$45.60, according to the current dividend scale. Dividend amounts, of course, are declared once a year and therefore cannot be guaranteed for the future.

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BETTER BUY DISHWASHERS... BETTER BUILT BY HOBART bility, the shady business is said to feed on personal vanity.

According to Robert Reid, who made a detailed study of American diploma mills last year for the American Council on Education, the appeal is one of "flattery by association." Invitations to join usually are accompanied by membership lists that include distinguished foreigners.

Installment plans and a wide selection of courses are among the lures used. One such "school," the "St. Andrews Correspondence College" in the vicinity of London, offers a degree course in mental science, which includes "how to treat patients and help them correct their own diseases."

Despite Mr. Reid's appearance before a private briefing session of the Association of American Colleges in Washington and mounting evidence of millions of dollars wasted in the sale of meaningless academic degrees and honors, no effective action has been taken by the states to make the chartering of such institutions impossible.

# Freshmen To Live in Mobile Homes

COLLEGE PARK, MD. – The "big wheels" on the University of Maryland campus belong to trailers. Hardpressed to find dormitory room for 4000 students, the university is housing about 600 male freshmen in mobile homes on the main campus.

The 64 aluminum trailers, each divided into four two-man rooms with double-decker bunks, closet, drawer space, and desks, will be temporary quarters while new residence halls are being completed.

#### Tape Recorded Courses for Utah State

LOGAN, UTAH. — A television studio at Utah State University is being equipped to turn out tape recorded courses for broadcast to the student body and the home viewer.

A major benefit of the on-campus operation will be the elimination of the twice-a-week treks, taken since 1954 by faculty members, 80 miles over the mountains from the university to the nearest television transmitters in Salt Lake City.

The equipment being installed consists of an advanced type of tape recorder, two vidicon studio cameras, film and slide projectors, multiplexer, film camera, and switcher.

"The new studio facilities will help us to live up to the university motto, 'The State Is Our Campus,'" said Daryl Chase, university president. According to Mr. Chase, the new studio equipment installed by the Radio Corporation of America will enable the school to produce material in Logan and mail the finished tapes to both commercial and educational television stations in Salt Lake City.

The addition of transmission equipment makes possible the establishment of the first link in what is expected to become a statewide network of educational TV stations.

#### Dispute on Rooms **Ends at Princeton**

PRINCETON, N.J. - A dispute over adequate fire exits that kept five bedrooms in a new Princeton University residence hall shuttered for almost a month has ended.

Arthur T. Brokaw, borough engineer, said that he and the university's architects had agreed on installing a firedoor in one of the rooms, with stairs leading to the roof. Occupancy permits for the five rooms were refused by Mr. Brokaw because the rooms allegedly did not have proper egress in case of fire.

#### Soviet Fellowships **Draw Foreigners**

Moscow, U.S.S.R. - "I would study in any country that gave me the opportunity," Sumith Deunuwre of Ceylon said to a New York Times correspondent recently, as he sat in a lunchroom of Moscow's University of Friendship of Peoples.

A 22 year old student of economics, Mr. Deunuwre was voicing the feelings of many of the young men and women here from 65 underdeveloped countries of Africa, Asia and Latin America, the correspondent said. The students were in Moscow for the opening of the Soviet university.

A total of 500 students from foreign lands will be enrolled by the end of the year, as well as 60 Soviet students. Premier Khrushchev calls his program an effort to broaden Soviet contacts and influence in the uncommitted areas of the world. The students will have tuition, living and travel expenses paid for by the Soviet government.



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#### BETTER BUY SLICERS... BETTER BUILT BY HOBART

# Yale Gets New Home for Old Books

New Haven, Conn. — Six old buildings at Yale University will be torn down to make way for the new Rare Book and Manuscript Library. A modern building of translucent onyx in fluctuating tans will be constructed next year to house the university's 180,000 rare volumes.

Virtually the entire interior will be a space free of the need for the stresses of roof and walls. These will be carried on four corner columns and trusses of steel on the four facades. One of the many features of the library will be illuminated bookshelves.

#### Harvard Gets Fund for Public Health

CAMBRIDGE, MASS. — The Kresge Foundation of Detroit has made a \$250,000 grant to the Harvard University School of Public Health.

The university will use the money to construct a \$2 million building for research in environmental health problems, including air pollution, contamination of food and water, accidents in industry and transportation, and peacetime hazards of radioactivity.

Working in the new structure will be physicians, engineers, geologists, physiologists, chemists and others engaged in a coordinated study of the medical and engineering aspects of environmental hazards.

#### Queens College Denies Anti-Catholic Bias

NEW YORK. — The president of Queens College, Dr. Harold W. Stoke, accused the State Commission Against Discrimination of using false statistics to bolster its charge of anti-Catholic bias at the school.

The commission made its charge of bias in a reply filed in the state supreme court to a suit brought by the Board of Higher Education of New York City. The suit sought to stop an inquiry by the state anti-discrimination agency. The board contends that the commission has no jurisdiction over teacher employment.

The commission has alleged that there was evidence of discrimination against the employment and promotion of Roman Catholic teachers. It noted that of a total staff of 425 there were only 22 Catholics in teaching positions and eight in nonteaching positions. It further held that charges of bias had been prevalent "for a number of years."

Dr. Stoke categorically denied any religious discrimination against faculty members and said the college "makes no inquiry and has no records of any kind as to the religious affiliations of its staff." He charged that the agitation had been fostered by a few members of the college's staff who deliberately alleged acts of discrimination "to explain their lack of academic success and to obtain promotion."

# M.I.T. Center Attracts Computer Science Students

CAMBRIDGE, Mass. — Problems ranging from calculating the orbit of Sputnik I to estimating the poultry market fluctuations are being solved at the Massachusetts Institute of Technology by one of the world's largest high-speed digital computers.

Part of a computation center established for education and research in



New England colleges and universities, the computer is helping to attract graduate students to the field of computer science.

Since the M.I.T. center was opened in June 1957, more than 2000 students and faculty members of 32 New England colleges and universities have learned how to use the technical machine.

#### La Salle College Dedicates \$2 Million Science Center

PHILADELPHIA. — The third step in a \$10 million, four-year fund drive was recently realized at La Salle College when the school dedicated a \$2 million science center.

The three-story center, which contains laboratories, lecture rooms, offices and a penthouse for the storage of live animals, is expected to revolutionize the facilities and scope of the college's science programs. It houses La Salle's physics, biology, chemistry and psychology departments.

Built of reinforced concrete with an exterior of marble, limestone and aluminum, the center has an ultramodern design that contrasts with, yet lends beauty to, the traditional, ivy covered buildings.

#### Library Established for Automatic Merchandising

MIAMI BEACH. — St. Louis University's new \$4,250,000 Pius XII Memorial Library will house a special library devoted to automatic merchandising. The National Automatic Merchandising Association, in recent convention here, pledged its full support to the program.

In announcing establishment of the library, Thomas B. Donahue, president of the association, said, "It is vital that a permanent center for collection and research be provided for this important retailing channel."

Mr. Donahue, who donated \$5000 as an initial fund, stressed the central location and growing reputation of the St. Louis University library as being ideally suited for the industry-wide collection of books, manuscripts and other data.

The library will acquire and maintain an industrywide book collection, including the retailing applications of automatic merchandising, history of the industry, and the manufacture of machines, as well as other technical phases. A complete collection of the

industry's trade journals also will be a part of the library.

## Ford Foundation Grants to Southern Universities

New YORK. — A series of grants to strengthen and expand engineering education at the doctoral level in Southern universities has been announced by Henry T. Heald, president of the Ford Foundation.

"The development of high-quality programs in engineering education at the doctoral level is an imperative national need," Dr. Heald said. "The South, with its expanding industrial and research facilities, shares the vastly increased demand for highly trained engineers. The hope is that these grants will assist these institutions to advance further their doctoral programs and improve even more the qualifications of their engineering faculties."

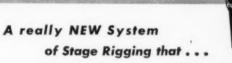
Totaling \$3,110,000, the grants will go to the University of Florida, Georgia Institute of Technology, North Carolina State College, and the University of Texas.

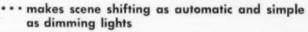
# HARVARD'S LOEB DRAMA CENTER

FEATURES

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#### Media Research Has Little Impact on Schools

UNIVERSITY PARK, PA. — Research on the use of television, films and other media in our educational programs has had little impact on our schools and colleges.

This was the conclusion reached by educators attending the Conference on Research in Newer Education Media held recently at Pennsylvania State University.

Dr. Charles F. Hoban Jr., research professor of education at the University of Pennsylvania, said that educators have done next to nothing about utilizing the findings of research, reminding them that almost 30 years ago it was determined that motion pictures and related projected materials increase the learning of facts.

Sponsored under Title VII of the National Defense Education Act of 1958, the conference was called to assess developments and evaluate results of research in the newer media of communications, to encourage better research, and to weigh educational results.

It was agreed that there is a definite need for encouragement of college and university superivsors and operating personnel to utilize the facts known about the use of television, films and filmstrips, teaching machines, and other media.

#### Teaching Machines Herald Revolution in Education

Los Angeles. — A quiet revolution is under way in the United States. In a few years it may radically alter our traditional teaching methods, grading systems, and classroom layout. Teaching machines, which frequently resemble a cross between a small TV set and a pinball machine, are causing this change.

Virtually an automated tutor, the teaching machine was blueprinted 30 years ago. Its full potentialities are only now being widely recognized.

Ranging in cost from \$20 to several hundred dollars, the machine itself is only the outer frame. Inside the machine is the program, the carefully sequenced instructional material that makes up a lesson or course.

Will the machines dehumanize schools and turn the classroom into a mechanical assembly line, as some critics fear? Just the opposite, according to Arthur A. Lumsdaine of the

University of California. Dr. Lumsdaine, an education psychologist, believes the machine will serve as a personal tutor for each student in three main ways:

 The machine demands answers at all times, keeping the student constantly alert and busy.

As a proficient tutor, the machine insists that the student understand each point completely, before he passes on to the next question. As a by-product, cheating can be eliminated.

The student learns at his own rate of understanding, the brighter student faster, the average student more slowly but without getting discouraged.

Dr. Lumsdaine, in collaboration with Robert Glaser of the University of Pittsburgh, collected and analyzed widely scattered reports on teaching machines. The data has been published in a book titled "Teaching Machines and Programmed Learning."

#### Wagner Campus Becomes Arboretum

STATEN ISLAND, N.Y. — The 76 acre hilltop campus of Wagner College will become an arboretum in the near future. Following months of discussions between college personnel and garden club leaders, the college was selected as the best spot for a garden showplace by Staten Island garden clubs and the Staten Island Arboretum.

The campus will have plantings throughout, with trees and shrubs tagged by name for study and educational purpose.

#### Students Scale Leaning Tower of Pisa

FLORENCE, ITALY. — Students at Stanford University's branch campus here, filled with the proverbial "old school spirit," scaled the Leaning Tower of Pisa to proclaim their hopes for a victory in a football game.

A 60 foot banner with 6 foot high letters was fastened atop the tower to show, the students' desire for an upset in the game with the University of California on November 19.

#### **Ban Smoking in Classroom**

PRINCETON, N.J. — Undergraduates at Princeton University will not be able to smoke in classrooms in the future. The ban has nothing to do

with smoking as a moral question. It's a question of dollars. The university hopes to save \$16,000 a year in cleaning and floor refinishing costs.

#### NAMES IN THE NEWS



N. A. Wahlstrom

Nelson A. Wahlstrom, controller and treasurer of the University of Washington, Seattle, has accepted the position of executive director of

the Committee on Government Relations of the National Federation of College and University Business Officers Associations in Washington, D.C. Mr. Wahlstrom will leave the university in January.

Dr. J. Paul Leonard has announced his retirement from the presidency of the American University of Beirut, Lebanon. He is leaving America's oldest overseas university January 1. Prior to his becoming president in Beirut, Dr. Leonard was the head of San Francisco State College. No announcement concerning his successor has been made.

Nathan W. Levin has been named acting president of The New School in New York. Mr. Levin is the chairman of the executive committee and vice chairman of the board of trustees. Dr. Abbott Kaplan, previously named president, was unable to assume that office because of illness in the family.

Dr. Robert Kenneth Carr defended the liberal arts college in his inauguration address when he was installed as the ninth president of Oberlin College, Oberlin, Ohio. Dr. Carr challenged the United States to spend adequate funds on higher education.

Frank R. Benitz has been appointed to the newly created post of auditing assistant at Upsala College, East Orange, N.J. Donald C. Anderson, who has served as administrative assistant at the college, will become the manager of office services.

John Hunter Detmold has been named vice president for development at Mills College, Oakland, Calif. Mr. Detmold resigned his position as director of development at Sweet Briar College, Sweet Briar, Va., to accept the office.

Francis G. Cornell, former president of the American Educational

Research Association and past director of the research and statistical service, U.S. Office of Education, has become the head of Educational Research Services, Inc., New York. Mr. Cornell will lead the organization in consulting and advising educational institutions. Other members of the firm are Frank G. Lopez and Curtis Roosevelt.

Dr. James W. Miller has been appointed president of Western Michigan University, Kalamazoo. The present secretary of the board of trustees



James W. Miller

of Michigan State University, Dr. Miller will become Western Michigan's third president on January 1. He is a political scientist.

Robert D. Amaden, former assistant to the president at Lake Forest

College, Lake Forest, Ill., has been appointed vice president for administration. Other staff changes are: John S. Mun-



Russell V. Kohr

shower to business manager, Jerry R. Patterson to director of development, and Paul W. La Due to controller. Mr. Patterson will succeed Russell V. Kohr, who has become the director of special funds at Northwestern University in Evanston, Ill.

Dr. John J. Meng was installed as the sixth president of Hunter College, New York. He succeeds Dr. George N. Shuster. In his installation address, Dr. Meng called for a return to the teaching of absolute values and norms of human conduct. He has served as dean of administration at Hunter since 1952.

Anthony V. Capillo, formerly manager of housing at Illinois Institute of Technology, has been appointed assistant director of housing at Northwestern University, Evanston, Ill.

Gustave C. Zader has been named vice president for development and public relations at the College of Great Falls, Great Falls, Mont.

Gordon P. Freese, administrative vice president of Stephens College, Columbia, Mo., has accepted the position of executive vice president of the Art Association of Indianapolis. Mr.



#### ROLL IT!



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THE BASSICK COMPANY, Bridgeport 5, Conn. In Canada: Belleville, Ont.





Freese will continue to serve Stephens College in a consultive capacity for several months following his January departure.



The Very Rev. Henry J. Mc-Anulty, C.S.Sp., has succeeded the Very Rev. Vernon F. Gallagher, C.S.Sp., in the presidency of Duquesne Uni-

Rev. McAnulty of Duquesne University, Pittsburgh. Father McAnulty had served as assistant to the presi-

LEARNING BY SEEING

dent of Duquesne for two years. Prior to that he was a chaplain in the air force for 14 years.

Dr. Henry T. Heald, president of the Ford Foundation, has been appointed by Gov. Nelson A. Rockefeller as head of a special commission to recommend ways by which New York State can meet the growing demands for higher education.

Dr. Fenton Keyes, sociologist and former Texas Woman's University dean, is the new president of Coker College, Hartsville, S.C. He succeeds Dr. John A. Barry Jr., who resigned

a year ago. Dr. Kenneth G. Kuehner, academic dean, served as acting president in the interim.

Robert E.
Hartz has been appointed an associate director of nonacademic personnel at the Urbana campus of the University of Illinois. The



Robert E. Hartz

announcement was made by the director of the office of nonacademic personnel, **Donald E. Dickason.** Mr. Hartz was formerly concerned with the administration of the university's labor relations. He is succeeded in that post by **Clifford Dammers**.

Dr. Robert H. Kroepsch is the new executive director of the Western Interstate Commission for Higher Education. Dr. Kroepsch has held a similar position with the New England Board of Higher Education for the last four years. He succeeds Harold L. Enorson, who has become vice president of the University of New Mexico.



T. H. Carroll

Thomas Henry
Carroll, the new
president of
George Washington University,
Washington,
D.C., will assume
office in February. Dr. Carroll

was formerly vice president of the Ford Foundation. He is a member of the President's Advisory Committee on the 1961 White House Conference on the Aging.

George Garland Allen, chairman of the Duke University Endowment, Durham, N.C., died, at his home in Scarsdale, N.Y., after a long illness. He was a member of the board of trustees and at various times had served its executive and building committees. He was 86 years old.

Dr. Herman T. Briscoe, retired vice president and dean of faculties of Indiana University, died recently in Robert W. Long Hospital, Indianapolis. He had been under treatment since he suffered a heart attack. He was 66 years old.

Howard Hazleton, business manager of the University of Illinois, Chicago Colleges and Divisions, died, November 4, of coronary thrombosis. He had been with the university since 1937. He was 58 years old.

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#### DIRECTORY OF ASSOCIATIONS

#### National Federation of College and University Business Officers Associations

President: Charles H. Wheeler III, University of Richmond; secretary: Kenneth Dick, University of Idaho.

#### Canadian Association of University Business Officers

President: M. C. Tillotson, Queen's University; secretary-treasurer: D. S. Claring-bold, treasurer, Hart House, University of

#### National Association of College Stores

President: C. Paul Irvine, Oregon State College Cooperative Association, Corvallis, Ora.; general manager: Russell Reynolds, 55 East College Street, Oberlin, Ohio.

#### American College Public Relations Association

President: Lyle M. Nelson, University of Michigan; executive director: Frank L. Ashmore, 1785 Massachusetts Ave., Washington 6, D.C.

#### Association of College and University Housing Officers

President: Fred A. Schwendiman, Brigham Young University; secretary-treasurer: A. Thornton Edwards, Kansas State University.

#### Association of College Unions

President: Gerald T. Erdahl, N. C. State College, Raleigh, N.C.; secretary-treasurer: Edgar A. Whiting, Cornell University; edi-tor of publication: Porter Butts, University of Wisconsin.

Convention: April 16-19, Broadmoor Hotel, Colorado Springs, Colo.

#### Associations of College and University Business Officers

#### American Association

President: G. Cletus Birchette, Atlanta University; secretary: C. E. Prothro Jr., Tuskegee Institute.

Convention: May 4-6, Texas Southern University, Houston.

#### Central Association

President: Harlan Kirk, Michigan State University, East Lansing, Mich.; secretary-treasurer, James J. Ritterskamp Jr., Washington University, St. Louis.

Convention: April 30-May 2, Kansas City,

#### Eastern Association

President: Vincent Shea, University of Virginia; secretary-treasurer: Kurt M. Hertzfeld, Boston University.

Convention: Dec. 4-6, White Sulphur Springs, Va.

#### Southern Association

President: C. L. Springfield, Southwestern at Memphis; secretary: C. O. Emmerich, Emory University.

Convention: April. Birmingham, Ala.

#### Western Association

President: Harry E. Brakebill, San Francisco State College; secretary: Charles O. Pierpoint, University of Redlands. Convention: April 30-May 3, Portland,

Ore.

Vol. 29, No. 6, December 1960

#### National Association of **Educational Buyers**

President: Bruce Partridge, University of Delaware: executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

Convention: May 3-5, Chase Hotel, St. Louis.

#### College and University Personnel Association

President: Charles T. Clark, University of Texas: executive secretary: Donald E. Dickason, University of Illinois. Permanent head-quarters, 605 S. Goodwin Ave., Urbana, III.

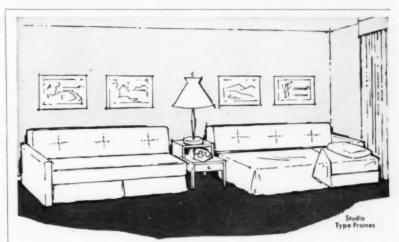
#### National Association of Physical Plant Administrators of Universities and Colleges

President: Carl M. F. Peterson, Massachusetts Institute of Technology; secretary-treasurer: John H. Sweitzer, Earlham College, Richmond, Ind.

Convention: July 3-7, Oregon State College, Corvallis.

#### American Alumni Council

President: George J. Cooke, Princeton University; executive director: Ernest T. Stewart, 1785 Massachusetts Ave., N.W., Washington 6, D.C.



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Spal will not damage any surface which is not harmed by water alone. It works well in hard or soft, hot or cold water; and only a small amount of Spal per gallon of water is needed for any cleaning job. Compare concentration, suds, costs and cleaning results with your present cleaner . . . that's the best way to be sure of the superiority of Spal.



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#### POSITIONS WANTED

Business Manager — Former university administrator recently business manager overseas multimillion dollar government installation seeks position; experienced institutional purchasing, budget, maintenance, construction, personnel, etc. Write to Box CW 577, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager or Director of Auxiliary Services — Master's Degree; 12 years university experience, last eight at executive level; background includes plant management, personnel, budgets, food service and counseling; prefer western location. Write to Box CW 549, COLLEGE AND UNIVERSITY BUSINESS.

Bookstore Manager — Ten years experience in university bookstore management; purchasing; university press; counseling; preparation of budgets; public relations; age 47; married. Write to Box CW 574 COLLEGE AND UNIVERSITY BUSINESS.

Director of Buildings and Grounds or Similar Title — Presently director at large State Capitol, over 300 employees; million dollar budget yearly, also university experience; college trained, diploma in Archtecture, vast experience in procedures, work order systems, cost accounting, etc.; prefer permanent connection in west or midwest. Write to Box CW 576, COLLEGE. AND UNIVERSITY BUSINESS

Director of Services — Ten years experience university level background includes counseling, comptrollership; fund raising and public relations. Write to Box CW 563, COLLEGE AND UNIVERSITY BUSINESS.

Food Director — Qualified, experienced, high volume, multi-unit operator; knowledge of student union, dining hall and commercial food services; Degree Institutional Management, Write to Box CW 575, COLLEGE AND UNIVERSITY BUSINESS.

Manager — Cafeteria Student Union — Presently employed; serving 6000 meals daily; private college preferred. Write to Box CW 573, COLLEGE AND UNIVERSITY BUSINESS.

#### POSITIONS OPEN

Cafeteria Supervisors — (2) Male, serve 9,000 meals per day from 8 cafeteria lines; college Degree in Institutional or Restaurant Management, retirement, social security, sick leave, excellent vacations, 5-day week; submit complete resumé and send recent photograph. Apply to Gilbert P. Volmi, Director, University Food Service, UNIVERSITY OF MARYLAND, College Park, Maryland.

Dietitians — (3), 100 on staff, 9,000 meals per day; college Degree in Institutional Food Management and one year top supervisory experience required; salary \$5350 — \$6688; excellent advancement opportunities, retirement, social security, sick leave, excellent vacation, 5-day week; submit complete resumé and send recent photograph. Apply to Gilbert P. Volmi, Director, University Food Service, UNIVERSITY OF MARYLAND, College Park, Maryland.

Foods Director — Pacific coast, university student union; responsible for soda bar, coffee shop, grill, small cafeteria, catering; academic background and degree required; salary flexible depending upon experience. Write to Box CO 377, COLLEGE AND UNIVERSITY BUSINESS.

Purchasing Agent — For State Medical School; southwestern U.S.; \$5,784 up; experienced in purchasing with degree; responsibility for large office. Send resume to Box CO 378, COLLEGE AND UNIVERSITY BUSINESS.

Treasurer — St. John's College, Annapolis, Maryland, seeks officer, competent in finance, budget, development and general administration. Address President RICHARD WEIGLE.

University Food Supervisors — Large private castern university has openings for experienced residence halls dining room supervisors and cafeteria supervisors; male or female; salary open; many fringe benefits including free tuition for employees and families. Send resumé to Box CO 380, COLLEGE AND UNIVERSITY BUSINESS.

#### COLLEGE AND UNIVERSITY BUSINESS

919 N. Michigan Avenue, Chicago 11, III.

Edited by Bessie Covert

## WHAT'S NEW

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card on page 83. Circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

#### Maximum Convenience and Efficiency in Bernco Language Laboratory

Human engineering, ensuring maximum efficiency and convenience for the user, was the basis for design by Wesley V. Patterson in developing the Bernco Lan-guage Laboratory. The tape decks and



other components for the student booths are mounted at an easily read angle above the surface of the desk, leaving the entire desk space uncluttered, and the booth gives as much comfort for a left as a right-handed pupil. Only pushbuttons are used in the booths with each button controlling just one operation. Extended desk space on right and left brings the student forward in the booth as he rests his arms in a comfortable position. The slim console for the instructor's desk puts all controls within easy reach without stretching and as many as ten separate programs can be provided simultaneously in a 30-station laboratory. Projectors, slidefilms and other visual aids can be incorporated into and controlled from the console. Bernco Inc., 129 E. Market St., Indianapolis, Ind.

#### For more details circle #810 on mail Mechanized Upholstery System Now Used for Simmons Furniture

A new mechanized upholstery system known as U. S. Raval, developed by



United States Rubber, is now used by Simmons Company in upholstering furniture. The F785 side chair illustrated is upholstered in the Kenya pattern of Naugahyde, and the system permits the application of the stripe in an absolutely straight, horizontal line. The new system makes possible the shaping or forming

cluding both contoured and tufted surfaces that can be concave and convex. New designs are also possible with the system. Simmons Company, Merchandise Mart, Chicago 54.

For more details circle #811 on mailing card.

#### **B-Y Unit's Folding Mechanism** Has Steel Torsion Bar

Buoyancy and ease of operation are increased with the addition of a steel torsion bar in the folding mechanism of the 1960 Sico B-Y table and bench combination. Only slight manual effort is required to initiate the fold and the top and at-tached benches travel smoothly to the open and upright storage positions. Another improvement is the simplified bench removal permitted with new finger operated fasteners which hold the benches securely in place and allow for their removal without the use of tools so that the tables may be used alone. Sico Mfg. Co., Inc., 5215 Eden Ave. S., Minneapolis 24,

For more details circle #812 on mailing card.

#### **Aluminum Towel Dispenser** Is Easily Maintained



The clean, rust-free appearance of the new Bay West towel dispenser is easily maintained with minimum care since it is formed of polished aluminum. Loaned free to users of Mosinee TurnTowls, the new cabinet was tested for two years in a school and in industry before being put into production. Directions for use are permanently embossed on the front. Bay West Paper Co., 1100 W. Mason St., Green Bay, Wis.

For more details circle #813 on mailing card.

#### "Science Circle" Furniture Provides Maximum Work Space

High quality construction at a price to fit the average school budget is combined with maximum work space in the new Sjostrom "Science Circle" furniture for science departments. The new design features circular tops, a choice of several storage bases, and inter-connecting sinks.

of cushioning by mechanical means, in- The illustration shows three different base units, picturing the types available, and will accommodate twelve students, four at each table. Various other formations can be made to conform to requirements, one connector sink being used with two work tables in every case. Services include stainless steel sink bowls, cold water



faucets, gas cocks and duplex electrical outlets. John E. Sjostrom Co., 1717 N. 10th St., Philadelphia 22, Pa.

For more details circle #814 on mailing card.

#### Nine Accent Colors Added to Vitritile Line

Designed for use in areas where esthetic and decorative appeal are factors in architectural design are nine accent colors added to the standard line of Vitritile ceramic glaze structural facing tile. The new colors are deeper, richer and more vivid than the standard field shades, and accent, contrast and harmonize with them. Natco Corp., 327 Fifth Ave., Pittsburgh

For more details circle #815 on mailing card.

#### Beseler Polarizing Spinner Creates Motion Effects on Screen

A new dimension is added to overhead projection with the Beseler Polarizing Spinner, an accessory for use with most Vu-Graph Projectors. Specially treated transparencies used in conjunction with



the Spinner while it is rotated by motorized action create the effect of motion on the screen. The unit can also achieve such effects as fade-ins, fade-outs and color changes. Chas. Beseler Co., 219 S. 18th St., East Orange, N.J.
For more details circle #816 on mailing card.

(Continued on page 78)

Water Distribution System Keeps Disposer Clean and Odor-Free

Designed for large kitchen installations, the Hobart Model FW-500 is a self-contained, vertical, free-standing disposer with a 32-inch square table and a cone-



type feed chute. The five h.p. unit features a dual-injection water distribution system that prevents clogging of the line and keeps the machine clean and odorfree, and a delayed water shut-off permits additional water to enter the disposer if it is turned off before the waste line is clean, ensuring proper flushing of the drain. The self-feeding machine can be filled with food waste while it is idle. Hobart Mfg. Co., Troy, Ohio.

For more details circle #817 on mailing card.

#### Office Machine Cabinet Has Adjustable Shelf

Single section sorting files for additional storage of paper and forms may be attached on one or both sides of the new Lyon office machine cabinet. The right size for use with most office reproduction equipment and other types of machines, the cabinet has an adjustable shelf and built-in lock for safely storing supplies, and the pan-type sliding tray unounted under the top may be inverted for use as additional working space. Lyon Metal Products, Inc., 3 Plant Ave., Aurora, Ill.

For more details circle #318 on mailing card.

#### Unit Ventilators Now in Webster Line

Warren Webster and Company announces its entry into the unit ventilator field with a new line designed especially for school installation. This complements the Webster System for Schools which has been an accepted heating system for



over fifty years. The new line is offered in a range of five sizes, from 500 cfm to 1600 cfm standard air, to satisfy demands of modern school construction. The unit ventilator is engineered to be used with the Webster "Tru-Perimeter" Walvector, and is integrated into a compenion line of functionally styled storage cabinets. Warren Webster & Co., Inc., 17th & Federal Sts., Camden 5, N.J.

For more details circle #819 on mailing card

Liquid Form Bingo Easy to Handle

Packed in a non-breakable, reusable plastic bottle, Liquid Bingo Drain Pipe Opener provides safety and speed in dislodging slime, grease, hair, coffee grounds and other materials from pipes and plumbing fixtures without damaging glass, metal or porcelain, when used as directed. Bingo in its new liquid form is effective and easy to handle. Huntington Laboratories, Inc., Huntington, Ind.

For more details circle #820 on mailing card.

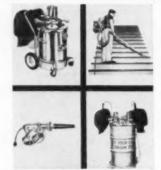
Rugged Strength and Modern Design In Book and Library Shelving Line

Rugged steel strength and modern design are combined in Equipto's new book and library shelving line. The shelving has one-piece sides, sleek cornice top, integral base, and sliding shelves that lock in place yet release at a touch for instant adjustment. Equipto, 612 Prairie Ave., Aurora, III.

For more details circle #821 on mailing card,

#### Wet-Dry Vacuum Cleaner Has Demountable Motor

A demountable motor that readily converts into a compact blower unit, a portable vacuum cleaner that straps on the operator's back, or a large capacity vacuum cleaner for use with a standard 55-



gallon drum makes the new heavy duty wet-dry Clarke vacuum cleaner a versatile unit. It is available with a choice of three interchangeable motor units and features an external filter and a 15-gallon heavy gauge stainless steel tank which mounts on either of two carriage bases. Clarke Floor Machine Co., 30 E. Clay Ave., Muskegon, Mich.

For more details circle #822 on mailing card.

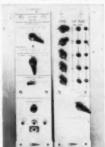
#### "T" Floor Seat for "Wall-A-Way" Partition

A positive closure at the bottom of the "Wall-A-Way" folding partition is assured with the "T" Floor Seat now a standard part of the device. Each door section is held rigidly in place, making the partition immovable when set with the "T" Seal. The seal follows the floor contour despite irregularities, making it self-aligning, and the simplified design assures trouble-free operation. The new "T" Seal allows the partition to operate as much as six inches off the floor. Torjesen, Inc., 209 25th St., Brooklyn 32, N.Y.

For more details circle #823 on mailing card.

#### Improved Teacher Panel One-Half Its Former Size

Master channel selection is increased from seven to 11 sources with the new modular console switch panel for language laboratories, LS 225, which sup-



plies individual master selection and may also maintain row master selection through the use of one switch. The improved teacher panel, LS 219-1, incorporates the all-call switch as well as a "master group" call switch, two guest monitor jacks and two auxiliary inputs for additional lesson sources, and is one-half its former width. Rheem Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.

For more details circle #824 on mailing card.

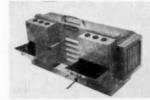
#### Aluminum Foil Metal-Cals Identify Property

Manufactured to order in a wide variety of colors, in either matte or bright finishes, Metal-Cals provide quick identification of property in institutions. They are light-weight appliques which may be applied in seconds without tools or fasteners and resist wear and weather. Designed for use on equipment as a deterrent to unauthorized "borrowing," Metal-Cals can be numbered serially at the factory or through use of any typewriter. When combined with a property listing, they are also helpful in adjusting claims in case of fire or other disasters. C & H Supply Co., 415 E. Beach Ave., Inglewood, Calif.

For more details circle #825 on mailing card.

#### Selectronair Purifier Filters Irritants and Odors

An electronic device, powerful enough to strain even the smallest bacteria and other irritating particles from the air, is



available in the Selectronair. Odors are also dispersed immediately, making the unit effective for use in kitchens and washrooms as well as in infirmaries and classrooms in helping to prevent cross infection. The lightweight Selectronair unit is carried by a chromium plated handle and is easily placed in a window and connected, ready for use. Selectronair, Inc., Shelton, Conn.

For more details circle #826 on mailing card.

#### Poster-Printer Produces In One or More Colors

A machine that will print on any type of board up to 12½ by 10 inches in size, the new Ten-Eight Craftool Poster-Printer economically and efficiently produces posters, displays, cards, block prints and other items in one or more colors. Simply



set up, the 16 by 14 by 19-inch machine has a four point pressure adjustment for a perfect impression and can use any standard printer's type or combinations of type, wood blocks, linoleum cuts, wood engravings or electros. Craftools, Inc., 398 Broadway, New York 13.

For more details circle #827 on mailing card.

#### Louvered "Up" Light Increases Eye Comfort

A special vented top opening in the shade of the new Cannon "Loover-Lite" Desk Lamp permits light to filter up and back, providing a soft glow on walls and ceiling and supplying a soft light for the

study room. The combination of the louvered "up" light and the lamp's regular down light is said to increase eye comfort and lessen strain, and the top vent results in a cooler light since air is drawn up through the shade and out through the



vent. The lamp, with "loc-tite" construction to withstand dormitory use, is available in four models. Cannon Products, Inc., Elwood, Ind.

For more details circle #828 on mailing card.

#### Mobile Dispenser for Travs and Silverware

Sanitation, strength and attractive appearance are features of the newly designed Frick Mobile Tray and Silverware Dispenser. All shelves are welded to the one-inch stainless steel tubular frame. The stainless steel tray shelves have raised lip edges and 180 trays, in sizes up to 15¼ by 20¼ inches, can be carried. Ten removable silverware containers with rounded corners, holding 100 to 120 knives, forks or spoons each, are held in the silverware housing, giving sufficient

space to supply cafeterias and dining rooms. The dispenser moves easily on five-inch metal wheels with neoprene



tires. Either dispenser section may be ordered separately. W. H. Frick, Inc., 704 Citizens Bldg., Cleveland 14, Ohio. For more details circle #829 on mailing care.

#### Medsan Germicidal Detergent Cleans and Disinfects

Practical for routine floor maintenance, mopping, hard scrubbing or machine cleaning, Medsan germicidal detergent is effective against both gram positive and negative bacteria. It has a high phenol coefficient and a dilution of one-half ounce per gallon of water acts as an effective disinfectant. It is also effective in general laundry operations to disinfect linens and blankets and it imparts continued resistance to bacteria when used in the last rinse. Finnell System, Inc., 1400 East St., Elkhart, Ind.

For more details circle #830 on mailing card.
(Continued on page 80)



## ENGINEERING AND DESIGN

PALMER Dormitory Furniture is factory-built furniture—functionally planned from the ground up. PALMER'S skilled designers and engineers work in concerted effort with architects when building is still in the design stage. This assures sound, functional arrangement, eliminates expensive and extravagant oversights.

#### PALMER DURABLE

## SPACE SAVING

## DORMITORY

PALMER Dormitory Furniture is sound, lasting, functional furniture, specifically designed, expertly engineered. At PALMER all research, all construction is devoted to the production of institutional furniture, featuring specialized, dependators our particular of the construction. For at PALMER this is our business—our entire business.

FOR ASSISTANCE IN PLANNING ROOM LAYOUTS WRITE DIRECTLY TO PALMER'S ENGINEERING STAFF, DEPT. CB-12.

PALMER FURNITURE CO., INC. DENMARK, SOUTH CAROLINA





Hydro-Vac "Air-Scoop" for High-Speed Floor Cleaning

Designed for fast pick-up of either wet or dry materials, the Hydro-Vac "Air-Scoop" cleans a 26-inch swath on each



pass and enables an operator to clean up to 25,000 square feet per hour. The new model is available as a complete vacuum unit, or it can be obtained as an attach-ment for standard 12 or 16 gallon Hydro-Vac wet-dry vacuum cleaners. Advance Floor Machine Co., Spring Park, Minn.

For more details circle #831 on mailing card

**Buffalo Chair and Table Trucks** Feature Adjustable End Handle

Designed to move and store most types of folding chairs and tables, the new line of Buffalo chair and table trucks is available in sizes to meet individual needs. The trucks carry standard folding chairs either standing upright or on their sides, and side rails are formed so that when chairs are handled "on-side," they rest on flat surfaces to reduce marring of the finish. Buffalo Caster & Wheel Corp., 859 Broadway, Hamilton, Ill.

For more details circle #832 on mailing card.

**Aqua-Dial Timing Device** Controls Eleven Remote Valves

A timer that is easy to set and operate is a feature of the new Aqua-Dial 511 automatic lawn sprinkler controller, a unit



that controls the operation of up to eleven remote valves, each controlling a portion of the sprinkling system. Separate dials on the Aqua-Dial control panel for each valve are turned to establish the precise watering time for each area. Individual dial settings may be changed without effecting the balance of the watering program, and the 511 also features simplified hour-and-day settings for a program that may be up to two weeks in duration. The controller may be switched to manual operation and the entire system can be deactuated by the simple flip of a switch. Aqua-Dial, Newport Beach, California.
For more details circle #833 on mailing card.

Refuse and Waste Cans Sanitized in Three Minutes

Only three minutes are required to wash, rinse and sanitize refuse and waste cans up to 22 inches in diameter and 30 inches high in the new Model Dean-R automatic can washer. The cabinet-type washer revolves the can as it is sprayed on the inside and outside with hot water and detergent. An automatic control device stops the operation immediately should the washer door be opened before the cleaning cycle is completed. The washer has smooth vibrationless action, eliminating the necessity of bolting it to



the floor. Washburn & Granger, Inc., 85 Fifth Ave., Paterson 4, N.J.

For more details circle #834 on mailing card.

Folding Aluminum Ladder Is Emergency Fire Escape

An aluminum link chain ladder that folds compactly beneath a window sill, the new Emergency Fire Escape is designed for multi-story buildings. Opening to a sturdy safety platform that crosses the window sill, the unit has safety rails for the individual to hold before descending and can be fastened at the bottom to prevent swaying. The device is suspended on a stainless steel shaft and requires no maintenance, is easy to install and has a low initial cost. Marryatt, Lane & Co., Inc., 248 Main St., Fort Lee, N.J.

For more details circle #835 on mailing card.

**Tape Storage Cabinets** Feature Color Coded Subject Index

Facilities for the filing of the master tapes used in language laboratories are provided in a new line of Neumade storage equipment. Featuring color coded subject indexing, position retaining clips and key locks for maximum security, the cabi-

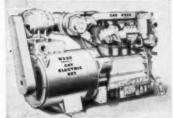


nets employ simplified indexing and cataloging to ensure prompt location of subject matter and reduce the possibility of mis-filing. Neumade Products Corp., 250 W. 57th St., New York 19.

For more details circle #836 on mailing card

Three Compact Cat Diesels Offer More Power in Less Space

In addition to the necessity for emergency standby electric power, supplements to utility power are often required with the increasing amount of electric equipment constantly being used. Caterpillar now offers three ultra-compact but high capacity Diesel-electric sets designed to produce kilowatts efficiently with minimum maintenance, and in minimum floor space. In addition, the new models have



low-sound level exhaust and minimum vibration.

The result of thirty years of research and experience, the new models are turbocharged as standard equipment but each is available with an aftercooler as optional equipment to pull more horsepower from the same package. Model D320 Series A produces 50 KW in standard operation, D330 Series A produces 75 KW, and the large D333 Series A produces 125 KW. All engines give optimum performance at low maintenance cost and are designed to fit most general uses with accessories for adaptation to a wide range of applications. The four-cycle design of the new models provides advantages such as complete, efficient elimination of all exhaust gases through full exhaust strokes; a precombustion chamber fuel system for combustion of a wide variety of fuels without smoke and odor, and gear driven dual shaft reciprocating inertia balancers to eliminate the natural vibration. Caterpillar Tractor Co., Engine Div., Peoria, Ill.

For more details circle #837 on mailing card.

Handy Hanging Storage Also Carries Athletic Equipment

A convenience for the storage and carrying of athletic equipment for each



player is offered in the Tote-N-Hang bag. Pockets of varying sizes and shapes in the bag hold the articles required by a player, ready for immediate use when hung on the inside of the locker door, yet protected when neatly folded into the compact carrying case with double handles. The Tote-N-Hang can be taken on team trips or to other areas of the athletic de-

partment and is covered in attractive Scotch plaid. Tote-N-Hang, P.O. Box 1817, High Point, N.C.

For more details circle #838 on mailing card.

#### Aero-Liner Plastic Mesh Protects and Dries Glassware

Resilient plastic mesh which permits air circulation and protects against breakage and noise is available in fifty foot rolls for use in dish washing and handling areas. Known as Aero-Liner, the mesh



assures quick air-drying of glassware and china and protects surfaces against scratching. It can be cleaned with steam and is easily cut to fit shelf areas. Rubbermaid Incorporated, Wooster, Ohio.

For more details circle #839 on mailing card.

#### Breaded Veal Drumsticks Are Portion-Control Item

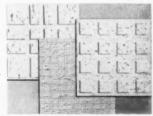
A new portion-control item, breaded drumsticks of choice chopped veal for institutional feeding operations, are an addition to the Pfaelzer Brothers line. Sold in 10-pound boxes containing 80 pieces, the drumsticks weigh two ounces

each, are placed on skewers for easy handling and are ready to be deep fat fried or baked. Pfaelzer Brothers, 939 W. 37th Pl., Chicago 9.

For more details circle #840 on mailing card

#### Three-Dimensional Patterns in Celotone Acoustical Tiles

Interesting textural effects and joint concealment are offered in the three dimensional patterns of the six incombustible



mineral fiber ceiling tile designs recently introduced by Celotex. Included are Empress Design Celotone with uniform squares in soft relief; Modulo Design Celotone, suggestive of a modular screen in low relief; Monarch Design Celotone with formal geometrics in relief; Striated Muffletone in large panels for fast installation, with washable thermo-plastic vinyl paint finish; Serene Perforated free-flowing pattern of miniature "sound traps," and Chase Celotone, designed for a special installation. The Celotex Corp., 120 S. La Salle St., Chicago 3.

For more details circle #841 on mailing card.

(Continued on page 82)

## it's new-it's a Halsey Taylor



No. 5907 "ALL-CLIMATE"
Outdoor Fountain
Patent Pending

#### An Outdoor Wall Fountain with Superior All-Weather Features

This new Halsey Taylor All-Climate Outdoor Fountain has exclusive all-weather features for outdoor use. Automatic frost-proof supply valve and drain assembly provide complete drain-back into cabinet in rear of wall. Valve extensions can be made to exact wall thickness. All exposed fittings chromium plated.

See Sweet's or the Yellow Pages

The Halsey W. Taylor Co., Warren, O.







Fountains Fountains

#### Literature and Services

· Helpful hints on choosing mobile folding units for multi-purpose rooms are contained in a new 12-page illustrated Buyer's Guide to Mobile Bench and Table Units. The booklet, available from Howe Folding Furniture, Inc., 1 Park Ave., New York 36, lists factors to consider and questions to ask before buying, and includes complete technical descriptions.

For more details circle #842 on mailing card.

 How Universal Portable Steel Bleachers go together easily and disassemble quickly for moving them about to gain multiple use is described in a new sixpage, two-color brochure entitled "How to Plan Your Outdoor Seating." Included in the illustrated booklet, available from Universal Bleacher Co., 1303 N. McKinley Ave., Champaign, Ill., is a chart showing seating capacities and dimensions that simplifies the selection of the proper size bleacher group.

For more details circle #843 on mailing card.

• The first Official P.S.S.C. Apparatus catalog is now available from Macalaster Bicknell Co., 253 Norfolk St., Cambridge 39, Mass., the distributor selected by Educational Services, Inc., to carry the line. Besides listing the materials and supplies required by the laboratory portion of the P.S.S.C. course, the 56-page illustrated booklet includes a section which gives a list of experiments.

For more details circle #844 on mailing card.

• How the Exit Lock (Model B) locks exits legally is discussed in a folder available from Best Universal Lock Co., Inc., 10 N. Senate Ave., Indianapolis 4, Ind. For emergency doors only, the exit lock can save lives and property by permitting the door to be opened in case of emergency while preventing unauthorized entry to service and other areas.

For more details circle #845 on mailing card.

· Hundreds of key pieces of Cenco laboratory and classroom equipment for teaching a wide range of sciences are illustrated in the new Purchase Guide Order Book available from Central Scientific Co., 1700 Irving Park Rd., Chicago 13. Organized in alpha-numerical order, the 80-page brochure contains order blanks for the purchaser's convenience.

For more details circle #846 on mailing card.

 Safety and convenience features of the "Bally-Hi" Ladder and illustrations of the unit in use and collapsed to go through doorways are included on a new catalog page captioned "Cut Time - Increase Speed," available from Ballymore Co., West Chester, Pa.

For more details circle #847 on mailing card.

• Two data sheets, "Chalkboard Care" (#SD-623) and "Classroom Sweeping Procedures" (#SD-621), offering detailed descriptions of the most effective methods for cleaning a blackboard and sweeping a typical classroom are available from Puritan Chemical Co., 916 Ashby St., N.W., Atlanta, Ga.

For more details circle #848 on mailing card.

 A summary of a study directed by Prof. Paul E. Mohn of the University of Buffalo entitled "Gas and Electric Heating in Two Schools at Angola, New York: School Year 1958-1959" is available from American Gas Assn., 420 Lexington Ave., New York

17, at 15 cents a copy.

For more details circle #849 on mailing card.

 Standard Steel Permanent Grandstands are described in a new four-page color brochure that pictures various sizes of Standard installations. Diagrams and specifications are also included in the booklet, available from Standard Steel Bleacher Div., Three Rivers, Mich.

For more details circle #850 on mailing card.

#### Suppliers' News

Bausch & Lomb, Incorporated, is the new corporate name of Bausch & Lomb Optical Co., Rochester 2, N.Y. The new name recognizes the fact that B & L is not restricting its research and manufacturing interests to the field of optics alone but will expand into related fields where its background and experience are of value.

Clarke Floor Machine Co., Muskegon, Mich., manufacturer of floor maintenance equipment, is now a division of Studebaker-Packard Corporation, according to announcement by Clarke President Ernest Cooper. The release states that there will be no changes in policies, management or field personnel, but the resources of Studebaker-Packard are expected to result in continuing and increasing expansion of facilities.





THIS FREE BOOKLET WILL HELP YOUR techniques . . helps solve common public address system problems, too. A basic guide to mastering microphone. guide to mastering microphone technique, fivaluable guide to the correct selection of microphones for improving public address systems.

A lecture is only as good as it sounds—and how it sounds depends first and foremost on the microphone. In designing the superb new Unidyne III microphone, Shure incorporated every feature that experience shows modern institutions need.

17 FOCUSES ON THE VOICE. Unidirectional pick-up pattern (from the front only) suppresses random background noise. Students hear you, not shuffling papers, not footsteps, not street noises. Completely controls annoying feedback "squeal."

UNPRECEDENTED VERSATILITY. Unobtrusive size, light weight, instant change from stand to hand, faithful response, extraordinarily rugged design, simplicity and utter reliability combine to make the Shure Unidyne III the most practical institutional microphone ever created.

SPECIAL LANGUAGE LABORATORY MODEL. Model 544—Highly and authoritatively recommended for master microphone in language lab. (Shure also makes a lower cost Model "425" "student-proof" microphone for use throughout language laboratory systems.)

write on your letterhead:

SHURE BROTHERS, INC. 222 Hartrey Avenue, Evanston, Illinois



MANUFACTURERS OF THE WORLD FAMOUS UNIDYNE WICROPHONE THE MOST REQUESTED MICROPHONE AN

## INDEX TO ADVERTISEMENTS

#### USE THIS PAGE TO REQUEST PRODUCT INFORMATION

The index on this and the following page lists advertisements in this magazine alphabetically by manufacturer. For additional information about any product or service advertised, circle the manufacturer's key number on the detachable postcard and mail it. No postage is required.

Products described in the "What's New" pages of this magazine also have key numbers which appear in each instance following the description of the item. For more information about these items, circle the appropriate num-

bers on the postcard and mail it, without postage, to College & University Business.

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FIRST CLASS PERMIT NO. 136 CHICAGO, ILL.

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No Postage Stamp Hecessary If Malled in the United States

POSTAGE WILL BE PAID BY

COLLEGE & UNIVERSITY BUSINESS

919 NORTH MICHIGAN AVENUE

CHICAGO 11, ILLINOIS

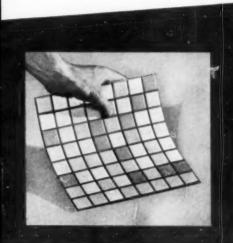


## New floor tile discovery from Romany Spartan...



rubber-cushioned ceramic mosaics

in 9"squares





Ceramaflex, because of its unusual flexibility. adjusts automatically to minor imperfections in sub-floor. But the rubber grid which makes this possible serves other functions, too. Ceramaflex floors are quiet because they are mounted in resilient rubber which acts as a cushion between the ceramic mosaic tiles and the sub-floor, and they are easy on the feet. Heavy furniture and appliances will not dent



rubber pockets!

Each of the 64 ceramic mosaics that make up one 9" x 9" unit is permanently bonded in a pre-formed rubber grid. Because the edges of Ceramaflex 9" x 9" units are beveled, they lay up so tightly that joints are unnoticeable in



So easily installed!

Because Ceramaflex is pre-grouted, installa-tion is simple and fast. It's ready for use the instant it's laid. Ceramaflex is installed with a special adhesive as quickly and easily as conventional resilient floor tile. It can be installed satisfactorily on or below grade as well as above grade, over proper sub-flooring. Simple, rapid installation results in application cost substantially lower than that of conventional ceramic mosaic floors.

#### PRODUCT DATA

CONSTRUCTION. Made of Romany Spartan unglazed l'x l'ceramic tiles which are securely bonded in a flexible rubber grid.

DIMENSIONS. Ceramaflex flooring units are 9" x 9" squares...and \( \frac{1}{52} \)" thick. Each Ceramaflex floor unit is composed of 64 ceramic mosaic tiles approximately 1" x 1".

FINISH. The surface of Cerama flex is sealed at the plant with a protective coating to prevent wearing-in of dirt and grime.

colors. Random medley patterns in twelve handsome color combinations.

Never has a flooring material offered so many advantages for use in schools and colleges as does Ceramaflex. This labor-saving, high quality product embodies all the most-wanted qualities of ceramic tile, plus two important additions: floors that are both quiet and easy on the feet. Here's the carefree beauty and permanence of ceramic tile in low-cost, easy-to-install form. It's dentproof, stainproof and fireproof, and once-over with a damp mop keeps it fresh and sparkling. This makes Ceramaflex a superior flooring for lobby, corridors, washrooms, cafeteria and kitchen.

Ceramaflex is as new as tomorrow. If your architect doesn't yet have his samples, he'll be glad to get them. Ask him about Ceramaflex, or write for Bulletin RS-228. United States Ceramic Tile Co., Dept. CU-16. Canton 2, Ohio.



\*Trade Mark. Ceramaflex is the exclusive prod-uct of United States Ceramic Tile Company.

JNITED STATES CERAMIC TILE COMPANY

## COMFORT PLUS ECONOMY

at Miami University Student Center





Hub of student activities at Miami University in Oxford, Ohio, is the spacious new Student Center. Its facilities include bowling alleys, dining rooms, lounges, a cafeteria, a ballroom, student publication offices, and meeting rooms.

To meet the varied thermal requirements for so many different activities, Johnson installed a specially planned pneumatic temperature control system which directs the operation of the building's heating, ventilating, and air conditioning equipment. Individual room controls assure an ideal environment for social and recreational activities at all times.

Designed for economy as well as for comfort, the Johnson System saves money in numerous ways. To conserve fuel, for example, temperatures are automatically adjusted according to expected occupancy schedules, with low, economy temperatures maintained in the unoccupied rooms.

At Miami University, as at so many other leading schools, Johnson has an outstanding record of providing dependable, trouble-free comfort control at the lowest possible lifetime cost. Since the first Johnson System was installed 44 years ago, every building on the campus has been Johnson-equipped!

When you build or modernize, insist on the unmatched performance and economy features of a Johnson Pneumatic Control System. Ask your architect, consulting engineer, or Johnson representative for complete details. Johnson Service Company, Milwaukee 1, Wisconsin. 105 Direct Branch Offices.



## JOHNSON CONTROL



DESIGN . MANUFACTURE . INSTALLATION . SINCE 1885

